

R6 Five-Year Review Checklist:

RPM: Hope Schroeder and Casey Lockett Snyder

FYR Lead Agency/Entity: U.S. Environmental Protection Agency

FYR Start Date in SEMS: 08/01/2019 _____

FYR public notice date: 12/4/2019

FYR inspection and community interviews: 11/20/2019

Draft FYR received date: 05.05.2020 _____

When the draft FYR is received:

- Please review and send to site team members for their review.
- Send to the state environmental agency for its review (if they were not the lead agency):
 - Draft FYR send date to state environmental agency: 5.5.2020. _____
 - Comments received date: 6.5.2020 _____
- Send to EPA HQ (Jennifer Edwards/OSRTI for private sites; Monica McEaddy/FFRRO for federal facilities) for HQ review.
 - Draft FYR send date to EPA HQ: 5.5.2020. _____
 - Comments received date: 6.5.2020. _____
- Please allow for 30 days for all reviews and feedback.

After review and feedback, please consolidate comments and send to Lead Agency/Entity: 06.22.2020.

Draft FYR consolidated comments send date to Lead Agency/Entity:

06.24.2020 _____

Draft Final/Final FYR received date: 06.22.2020. _____

After the Draft Final/Final FYR is received, please review and ensure all comments have been resolved.

Then begin R6 concurrence routing for final signature:

- R6 concurrence routing start date: 06.24.2020. _____
- R6 6SF briefing date (if one is scheduled): _____
- R6 Final FYR signature date: _____

After completion of final signature, please complete the SEMS records process to obtain the SEMS Document ID for the Final FYR: _____

Then send the Final FYR, along with the SEMS Document ID, to EPA HQ (to: David Reynolds/OSRTI, with cc: Jennifer Edwards/OSRTI, Charles Sands/OSRTI. For federal facilities, add cc: Monica McEaddy/FFRRO):

- Final FYR and SEMS Document ID send date to EPA HQ: _____

Send the Final FYR to the state environmental agency: _____

Ensure that the Final FYR is publicly available at the site local repository: _____

Ensure that the Final FYR is publicly available on the R6 site profile page (via Nancy Yarberry/R6): _____

Ensure that the Final FYR availability public notice is published: _____

Update SEMS with Issues/Recommendations Info (or send to Lydia Murungi/R6 for input into SEMS): _____

**FOURTH FIVE-YEAR REVIEW REPORT FOR
RSR CORPORATION SUPERFUND SITE
DALLAS COUNTY, TEXAS**



AUGUST 2020



Prepared by

**U.S. Environmental Protection Agency
Region 6
Dallas, Texas**

**FOURTH FIVE-YEAR REVIEW REPORT
RSR CORPORATION SUPERFUND SITE
EPA ID#: TXD079348397
DALLAS COUNTY, TX**

This memorandum documents the U.S. Environmental Protection Agency's performance, determinations and approval of the fourth Five-Year Review for the RSR Corporation Superfund site (Site) located in Dallas, Texas. The purpose of the Five-Year Review is to review the selected remedy and determine if it is and will continue to be protective of human health and the environment. The Five-Year Review was conducted pursuant to Section 121(c) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9621(c); its findings and determinations are provided in the attached Fourth Five-Year Review Report.

Summary of the Fourth Five-Year Review Report

This Five-Year Review Report summarizes the current status of the remedy at the RSR Corporation Superfund site. For nearly 50 years, RSR Corporation operated a secondary lead smelter in West Dallas. Facility operators processed spent car batteries and scrap lead. The company sent resulting waste materials, byproducts and batteries to nearby landfills where these wastes contaminated soils, sediment and groundwater (operable units (OUs) 3, 4 and 5). Wind transported lead dust from the smelter into nearby parks, schools and neighborhoods (OU1 and OU2). In the early 1990s, EPA and the Dallas Housing Authority cleaned up yards and properties (OU1 and OU2). The selected remedies at OUs 3, 4 and 5 included excavation of contaminated soil and sediment, demolition and removal of impacted equipment and building materials, construction of containment caps and soil covers, groundwater monitoring, and implementation of institutional controls. Remedial activities were completed by 2004.

Most of the property parcels within OUs 3,4 and 5 are in industrial use or unused. However, land use is rapidly changing in parts of West Dallas; therefore, it is important to ensure long term protectiveness of EPA's remedy through the implementation of institutional controls on property parcels with use limitations. Additionally, the operations and maintenance (O&M) plans need to be reevaluated to ensure continued protectiveness of the remedy.

Environmental Indicators

Human Exposure Status: Under Control

Contaminated Groundwater Status: Under Control

Sitewide Ready for Reuse: No¹

Actions Needed

The following action should be taken for the remedy to be protective over the long term:

- OU3 - Implement institutional controls on 15 identified property parcels which were previously remediated but where institutional controls are lacking.
- OU5 - Implement institutional controls on OU5 properties pursuant to the terms of the 2003 Consent Decree entered into by RSR Corporation.
- OU3 and OU5 - Reevaluate approved O&M plans and determine if O&M plan modifications are needed to ensure continued protectiveness of the remedy.

¹ 2015 Five-Year Review incorrectly indicated the Site was Sitewide Ready for Reuse.

Determination

I have determined that the remedy for the RSR Corporation Superfund site is currently protective of human health and the environment in the short term. In order for the remedy to achieve long-term protectiveness, the actions listed above should be implemented. This Five-Year Review report details actions needed for the remedy to be protective over the long-term.

WREN STENGER

Digitally signed by WREN STENGER
DN: c=US, o=U.S. Government, ou=Environmental Protection
Agency, cn=WREN STENGER,
0.9.2342.19200300.100.1.1=68001003651787
Date: 2020.08.19 11:24:46 -05'00'

Wren Stenger
Director, Superfund and Emergency Management Division
U.S. Environmental Protection Agency, Region 6

Date

CONCURRENCES

FOURTH FIVE-YEAR REVIEW REPORT RSR CORPORATION SUPERFUND SITE EPA ID#: TX079348397 DALLAS COUNTY, TX

Hope Schroeder
HOPE SCHROEDER
DER

Digitally signed by HOPE SCHROEDER
DN: c=US, o=U.S. Government, ou=Environmental Protection Agency, cn=HOPE SCHROEDER,
0.9.2342.19200300.100.1.1=68001003655416
001003655416
Date: 2020.07.29 09:19:26 -05'00'

June 24, 2020

Hope Schroeder
Remedial Project Manager

Date

CASEY LUCKETT
SNYDER

Digitally signed by CASEY LUCKETT SNYDER
DN: c=US, o=U.S. Government, ou=Environmental Protection Agency, cn=CASEY LUCKETT SNYDER,
0.9.2342.19200300.100.1.1=68001003655416
Date: 2020.07.29 09:13:01 -05'00'

Casey Lockett-Snyder
Remedial Project Manager

Date

Digitally signed by CHRISTOPHER VILLARREAL
DN: c=US, o=U.S. Government, ou=Environmental Protection Agency, 0.9.2342.19200300.100.1.1=68001003655440,
cn=CHRISTOPHER VILLARREAL
Date: 2020.07.24 13:29:27 -05'00'

Chris Villarreal
Chief, AR/TX Section

Date

JOHN MEYER

Digitally signed by JOHN MEYER
DN: c=US, o=U.S. Government, ou=Environmental Protection Agency, cn=JOHN MEYER,
0.9.2342.19200300.100.1.1=68001003655626
Date: 2020.07.29 09:52:39 -05'00'

John C. Meyer
Chief, Superfund Remedial Branch

Date

MATTHEW
MILLER

Digitally signed by MATTHEW MILLER
DN: c=US, o=U.S. Government, ou=Environmental Protection Agency, cn=MATTHEW MILLER,
0.9.2342.19200300.100.1.1=680010038829
92
Date: 2020.08.03 09:45:18 -05'00'

Matthew Miller
Attorney, Office of Regional Counsel

Date

I-JUNG CHIANG

Digitally signed by I-JUNG CHIANG
DN: c=US, o=U.S. Government, ou=Environmental Protection Agency, cn=I-JUNG CHIANG,
0.9.2342.19200300.100.1.1=68001003655489
Date: 2020.08.13 14:39:11 -05'00'

I-Jung Chiang
Chief, Superfund Branch, Office of Regional Counsel

Date

This page intentionally left blank

ISSUES/RECOMMENDATIONS

FOURTH FIVE-YEAR REVIEW REPORT

RSR CORPORATION SUPERFUND SITE

EPA ID#: TXD079348397

DALLAS COUNTY, TX

OU3	Issue Category: Institutional Controls			
	Issue: Institutional controls have not been implemented on 15 OU3 property parcels where waste is left in place or completed cleanups exceed remedial action goals, and use limitations are necessary to be protective.			
	Recommendation: Implement institutional controls on 15 identified property parcels which were previously remediated but where institutional controls are lacking.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	Yes	PRP	EPA/State	6/15/2023

OU5	Issue Category: Institutional Controls			
	Issue: The 2003 Consent Decree entered into by RSR Corporation requires that deed notices be filed on OU5 Subareas 2, 3 and 4 properties. EPA's 2020 Dallas County property records search shows that no notices are recorded on any OU5 Subarea 2, 3 and 4 properties.			
	Recommendation: File deed notices on OU5 properties as required by the 2003 Consent Decree entered into by RSR Corporation and include language in the deed notices that limits the protective use on the properties to industrial uses.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	Yes	PRP	EPA/State	6/15/2023

OU3 and OU5	Issue Category: Operations and Maintenance			
	Issue: Annual O&M activities have not been implemented at some portions of OU3 and OU5.			
	Recommendation: Reevaluate approved O&M plans and determine if O&M plan modifications are needed to ensure continued protectiveness of the remedy at each OU.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	Yes	EPA/PRP	EPA/State	6/15/2023

Table of Contents

LIST OF ABBREVIATIONS AND ACRONYMS	3
I. INTRODUCTION.....	4
Site Background.....	5
FIVE-YEAR REVIEW SUMMARY FORM	6
II. RESPONSE ACTION SUMMARY	8
Basis for Taking Action	8
Response Actions	8
Status of Implementation	11
Systems Operations/Operation and Maintenance (O&M)	23
III. PROGRESS SINCE THE PREVIOUS REVIEW	24
IV. FIVE-YEAR REVIEW PROCESS	25
Community Notification, Community Involvement and Site Interviews	25
Data Review	26
Site Inspection	26
V. TECHNICAL ASSESSMENT	26
QUESTION A: Is the remedy functioning as intended by the decision documents?	26
QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels and RAOs used at the time of the remedy selection still valid?.....	27
QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?	28
VI. ISSUES/RECOMMENDATIONS	28
OTHER FINDINGS	29
VII. PROTECTIVENESS STATEMENT.....	29
VIII. NEXT REVIEW	30
APPENDIX A – REFERENCE LIST	A-1
APPENDIX B – SITE CHRONOLOGY	B-1
APPENDIX C – PRESS NOTICE	C-1
APPENDIX D – SITE INSPECTION CHECKLIST	D-1
APPENDIX E – SITE INSPECTION PHOTOS.....	E-1
APPENDIX F – SCREENING-LEVEL RISK REVIEW	F-1
APPENDIX G – INTERVIEW FORMS.....	G-1

Tables

Table 1: Past and Current Uses at OUs 3-5	5
Table 2: Summary of Remedial Action Goals Established in OU3 ROD	9
Table 3: Summary of Remedial Action Goals Established in OU4 ROD	10
Table 4: Summary of Remedial Action Goals Established in OU5 ROD	11
Table 5: Summary of Planned and/or Implemented Institutional Controls (ICs).....	15
Table 6: Summary of OU3 Parcels with 24-Inch Soil Cover Areas that Require ICs.....	16
Table 7: Summary of OU5 Parcels that Require ICs.....	17
Table 8: O&M Responsibility by Area	23
Table 9: Protectiveness Determinations/Statements from the 2015 FYR	24
Table 10: Status of Recommendations from the 2015 FYR.....	24
Table B-1: Site Chronology.....	B-1
Table F-1: Screening-Level Risk Evaluation of OU3 Residential Cleanup Goals.....	F-1
Table F-2: Screening-Level Risk Evaluation of OU3 Cleanup Goals Based on Recreational Use.....	F-2
Table F-3: Screening-Level Risk Evaluation of OU3, OU4 and OU5 Industrial Cleanup Goals	F-2

Figures

Figure 1: Site Vicinity Map.....	7
Figure 2: OU3 Site 1 Institutional Control Map.....	18
Figure 3: OU3 Site 3 Institutional Control Map.....	19
Figure 4: OU3 Site 4 Institutional Control Map.....	20
Figure 5: OU4 Institutional Control Map.....	21
Figure 6: OU5 Institutional Control Map.....	22

LIST OF ABBREVIATIONS AND ACRONYMS

bgs	Below Ground Surface
BHHRA	Baseline Human Health Risk Assessment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIC	Community Involvement Coordinator
DHA	Dallas Housing Authority
EPA	United States Environmental Protection Agency
ERA	Ecological Risk Assessment
FYR	Five-Year Review
HQ	Hazard Quotient
IC	Institutional Control
mg/kg	Milligrams per Kilogram
NCP	National Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation and Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
RSL	Regional Screening Level
TCEQ	Texas Commission on Environmental Quality
UU/UE	Unlimited Use and Unrestricted Exposure

I. INTRODUCTION

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy to determine if the remedy is and will continue to be protective of human health and the environment and is functioning as intended by the implementation documents. The methods, findings and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) prepared this FYR pursuant to Section 121(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9621(c), the National Contingency Plan (NCP), 40 CFR § 300.430(f)(4)(ii), and in accordance with EPA policy.

This is the fourth FYR for the RSR Corporation Superfund site (Site). The triggering action for this statutory review is the completion date of the previous FYR. The FYR was prepared because hazardous substances, pollutants or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of five operable units (OUs). This FYR addresses OUs 3, 4 and 5 (Figure 1).

- OU1 consists of residential properties at the Site. The 1995 Record of Decision (ROD) stated that no further response or remedial action was necessary.² Therefore, this FYR does not address OU1.³
- OU2 consists of single- and multi-family housing units, as well as public, recreational and commercial uses.⁴ The 1995 ROD stated that no further response or remedial action was necessary. Therefore, this FYR does not address OU2.
- OU3 is divided into Sites 1, 3 and 4. Slag and battery chips from smelting and battery breaking operations were disposed of at these locations across West Dallas.
- OU4 is the location of the former smelter facility. It includes facility buildings and structures, the smelter stack, equipment and soils located at the southeastern corner of the intersection of Singleton Boulevard and Westmoreland Road. EPA deleted OU4 from the Superfund program's National Priorities List (NPL) in 2007.
- OU5 is divided into Subareas 1, 2, 3 and 4. It consists of a former battery breaking facility and other industrial tracts of land, including facility buildings and structures, a surface impoundment, a former landfill, the slag burial area and other soils, and stormwater runoff and sediments. Site 2 of OU3 was consolidated into OU5. EPA deleted OU5 Subarea 1 from the NPL in 2007.

EPA remedial project manager (RPM) Hope Schroeder led the FYR. Participants included EPA remedial project manager, Casey Luckett Snyder, EPA community involvement coordinator (CIC) Janetta Coats, Texas Commission on Environmental Quality (TCEQ) project manager Kenan Nerad, and Eric Marsh and Johnny Zimmerman-Ward from EPA FYR contractor Skeo. The potentially responsible parties (PRPs) were notified of the initiation of the FYR. The review began on October 1, 2019. Appendix A lists the documents used to prepare this FYR Report. Appendix B provides a brief site chronology.

² At OU1, EPA assessed nearly 7,000 properties and cleaned up the lead and arsenic contaminated yards of over 400 properties between 1991 and 1994. As a result of the removal actions, the 1995 ROD determined no further action was necessary at OU1.

³ Section 1.5.4 of the 2001 Comprehensive FYR Guidance, available online at:

<http://semspub.epa.gov/src/document/11/128607>

⁴ OU2 includes a 460-acre public housing area north of the smelter, including multi-family housing units owned by the Dallas Housing Authority (DHA), schools, parks, recreation facilities and a day care center. By 1995, cleanup activities completed included the removal of lead-contaminated materials and backfilling of excavated areas with clean fill. DHA demolished 167 contaminated buildings that housed over 1,000 individual apartments and cleaned up numerous public housing areas totaling more than 200 acres. As a result of the removal actions, the 1995 ROD determined no further action was necessary at OU2.

Site Background

The Site is in Dallas, Texas, in an area commonly referred to as West Dallas. OUs 3, 4, and 5 encompass about 300 acres (Figure 1). The OUs are interspersed within areas of residential, recreational, commercial and industrial uses.

A secondary lead-smelting and battery-breaking facility owned by Murph Metals started operating on-site around 1934. In 1971, RSR Corporation acquired the facility and operated the Site under the Murph Metals name until 1984 when it was acquired by Murmur. Facility operations ceased in the same year, when the city of Dallas decided not to renew the facility's operating permit. During operations, the smelting facility used lead scrap and lead from used car batteries as inputs for the smelting process. Alloy elements, including antimony, arsenic and cadmium, were added as necessary to produce the final desired product. Slag, the primary byproduct of the smelting process, was discarded along with battery chips on the surface in several surface-disposal areas and landfills across the Site. Municipal debris was also disposed of on-site. Lead slag and battery-casing chips were used in residential driveways and yards as fill material. Wind also transported lead particles emitted from the smelter stack into nearby parks, schools and neighborhoods.

OU3 consists of three separate sites (Sites 1, 3 and 4) and OU5 consists of 4 subareas (Table 1).

Table 1: Past and Current Uses at OUs 3 – 5

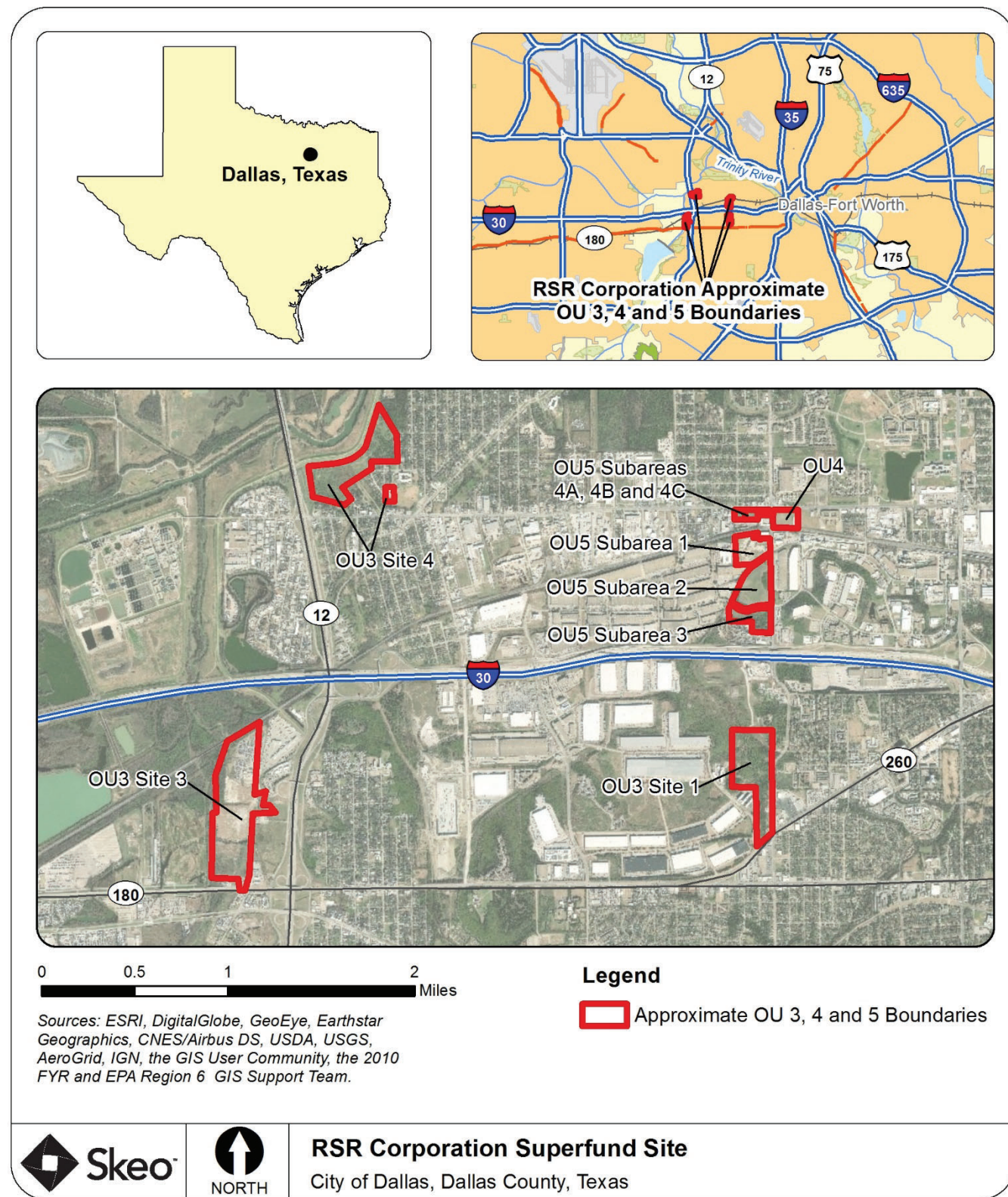
OU	Past Use	Current Use
OU3	OU3 Site 1, also known as the Westmoreland Road Property, covers about 50 acres and was the location of surface dumping of waste slag, battery chips and other material (mainly municipal debris).	Electrical substation is located on part of OU3 Site 1.
	OU3 Site 3, also known as the Walton Walker Property, covers about 130 acres and was formerly leased by the City of Dallas for the operation of three sanitary landfills from the mid-1960s to the early 1980s. Waste slag, battery chips and battery casings were disposed of on the surface at Site 3.	The northern portion of Site 3 is used as an auto salvage yard. A gas station is in business on the most southern portion of Site 3.
	OU3 Site 4, also known as the Claibourne Boulevard Property, covers about 60 acres and was formerly leased by the City of Dallas for the operation of four sanitary landfills from the 1950s through the mid-1970s. Waste slag and battery chips were present on the surface of Site 4. Site 4 also includes a small portion of Jaycee Park.	The majority of OU3 Site 4 is vacant. Jaycee Park remains a park on OU3 Site 4.
OU4	OU4 covers about 6.5 acres and is the former smelter facility. It includes the former smelter building, a 300-foot concrete stack and other associated site buildings.	In 2020, a gas station and convenience store were built on the northwest corner of OU4. The remainder of the property is unused.
OU5	OU5 is the former battery-breaking facility and other industrial land associated with the smelter facility (about 60 acres).	OU5 Subarea 1 – Dallas Barricade & Light headquarters are under construction; also includes buried slag disposal area, former surface impoundment and the former Vehicle Maintenance Facility
		OU5 Subarea 2 – capped landfill
		OU5 Subarea 3 – unused
		OU5 Subareas 4A, 4B and 4C – unused

Residents at the Site are provided with water from the City of Dallas water system, which is supplied by surface reservoirs many miles from the Site. Shallow groundwater at the Site is not generally considered a water supply aquifer. This is due primarily to the low yield of the alluvial deposits and the slightly saline water quality.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: RSR Corporation		
EPA ID: TXD079348397		
Region: 6	State: TX	City/County: Dallas/Dallas
SITE STATUS		
NPL Status: Final		
Multiple OUs? Yes	Has the Site achieved construction completion? Yes	
REVIEW STATUS		
Lead agency: EPA		
Author name: Hope Schroeder and Casey Luckett Snyder, with additional support provided by Skeo		
Author affiliation: EPA Region 6		
Review period: 10/1/2019 – 6/15/2020		
Date of site inspection: 11/20/2019		
Type of review: Statutory		
Review number: 4		
Triggering action date: 9/1/2015		
Due date (<i>five years after triggering action date</i>): 9/1/2020		

Figure 1: Site Vicinity Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

II. RESPONSE ACTION SUMMARY

Bases for Taking Action

EPA initiated the remedial investigation and feasibility study (RI/FS) for OU3 in 1993. EPA initiated the RI/FS for OUs 4 and 5 in 1994. In May 1993, EPA proposed the Site for inclusion on the NPL. EPA finalized the Site on the NPL in September 1995.

OU3

Through the RI, Baseline Human Health Risk Assessment (BHHRA) and Ecological Risk Assessment (ERA) conducted for OU3, EPA determined that soils and sediments posed a risk to human health through direct contact, inhalation, and ingestion due to arsenic, lead and antimony contamination. The BHHRA assumed that the reasonably anticipated future land use of OU3, Site 1 would be residential, and Sites 3 and 4 would be industrial. The possible risks to aquatic and terrestrial receptors were generally minimal, and no ecological cleanup criteria were developed. The groundwater, although contaminated, was not a source or potential source of drinking water due to its low yield and slightly saline quality.

OU4

Through the RI, BHHRA and ERA completed for OU4, EPA determined that incidental ingestion of soil and residual contaminated materials contributed the greatest percentage to the overall risk to human health posed by OU4 contamination. Arsenic was attributed with most of the cancer and noncancer risk. Cadmium and antimony also contributed to the non-cancer risk. The ERA determined that OU4 posed risks to on-site ecological receptors. EPA identified arsenic-, cadmium- and lead-contaminated dust and residual materials on and in site buildings, structures, the smelter stack and equipment as a principal threat (due to high toxicity and/or high mobility). Contaminated soils in the unpaved northeast area of the facility and subsurface soils under paved areas were deemed to be low-level threats (due to low-to-medium toxicity and low mobility). The groundwater in the area of OU4 was not being used as a potable water supply, nor was it expected to be used as a water supply. Therefore, ingestion of groundwater was not considered a complete pathway.

OU5

Through the RI, BHHRA and ERA completed for OU5, EPA determined that incidental inhalation and ingestion of soil and dust contributed the greatest percentage to the overall risk to human health posed by OU5 contamination. Arsenic was attributed with most of the cancer risk. Cadmium was attributed with most of the non-cancer risk. Antimony contributed greatly to the non-cancer risk. Lead concentrations were present above calculated acceptable levels based on the lead exposure evaluation done in the risk assessment. The ERA determined that OU5 posed risks to on-site ecological receptors through soil. Contaminated materials in the former surface impoundment, the slag burial area, dust in site buildings (Subarea 1), former landfill (Subarea 2), and contaminated soils (Subareas 1–4) were deemed to be low-level threats. The groundwater, although contaminated, was not a source or potential source of drinking water due to its low yield and slightly saline quality.

Response Actions

OU3

EPA signed the ROD for OU3 in September 1997. The remedial action objectives (RAOs), as listed in the ROD, were:

- Minimize exposure to lead, arsenic and antimony present in the slag piles/landfills (Sites 1, 3 and 4) by direct contact inhalation and ingestion and reduce the potential for migration of these contaminants.

The major components of the remedy included:

Site 1

- Excavation and removal of slag, battery chips and metals-contaminated soils exceeding cleanup goals to a depth of 2 feet.
- Excavation and removal of sediments in the intermittent creek exceeding cleanup goals.
- Backfilling and regrading of excavated areas using clean soil.
- Off-site disposal of the excavated material (i.e., slag, battery chips, soil and sediments) in an appropriate landfill.
- Monitoring of surface water for five years.
- No action recommended for the shallow groundwater.
- Deed notices and restrictions.

Site 3

- Containment (protective soil cap) of the southern portion and isolated areas of the northern cell of the West Davis landfill where exposed slag, battery chips and metals-contaminated soil exceed cleanup goals.
- Monitoring of surface water and groundwater for five years and annual inspection of the cap.
- No action recommended for the shallow groundwater.
- Deed notices and restrictions.

Site 4

- Containment (protective soil cap) of the area in the Nomas and West Dallas landfills where exposed slag, battery chips and metals-contaminated soil exceed cleanup goals.
- Excavation of areas of surficial contamination where cleanup goals are exceeded in Jaycee Park and placement under the protective cover in the West Dallas landfill (nonhazardous material) or transportation and off-site disposal (hazardous material).
- Monitoring of surface water and groundwater for five years and annual inspection of the cap.
- No action recommended for the shallow groundwater.
- Deed notices and restrictions.

The shallow groundwater beneath Sites 1, 3 and 4 of OU3 is not considered to be a potential drinking water supply (i.e., a Class III aquifer). Table 2 lists the remedial action goals for OU3 soils and sediments.

Table 2: Summary of Remedial Action Goals Established in OU3 ROD

Media	Remedial Action Goals (mg/kg)		
	Arsenic ^a	Lead ^b	Antimony
Residential			
Site 1, Soils and Sediments	20	500	NA
Jaycee Park	20	500	108 ^c
Industrial			
Site 3, Soils and Sediments	32.7	2,000	NA
Site 4 (excluding Jaycee Park) Soils and Sediments	32.7	2,000	NA
Notes: a. Remedial action goal established to achieve 1×10^{-5} risk level (for arsenic only). b. The 500 mg/kg cleanup goal for lead was based on residential risk-based calculations and the 2,000 mg/kg cleanup goal for lead was based on an Adult Lead Model (ROD Appendix) that uses the geometric mean value for lead to predict blood-lead levels in exposed workers. c. Established to reduce non-cancer hazard index to less than 1. NA = not a contaminant of concern for this area mg/kg = milligrams per kilogram			

OU4 and OU5

Waste drums, uncontained residual waste/debris piles and laboratory containers were found at OUs 4 and 5 during the RI. These materials were identified as an immediate concern that EPA needed to address. The non-time-critical removal action started in May 1995 and finished in July 1995. As a result of this action, drums of waste material and containers of waste laboratory chemicals were removed and disposed of off-site.

OU4

EPA signed the ROD for OU4 in February 1996. The OU4 RAOs, as provided in the ROD, were:

- Minimize the exposure to arsenic, cadmium and lead present in the buildings, structures, smelter stack and equipment and soils by direct contact, inhalation and ingestion, and reduce the potential for migration of these contaminants.

The major components of the remedy included:

- Removal, treatment and disposal of residual material.
- Demolition and decontamination of buildings/structures and equipment, including concrete pavement floors and connected drains and sumps (and associated sediments). Plug and properly abandon remaining open conduits not removed.
- Disposal of all building debris off site at appropriate landfill facilities.
- Demolition of the smelter stack and disposal off site at a Resource Conservation and Recovery Act (RCRA) Subtitle C landfill.
- Excavation of 13,500 cubic yards of contaminated soils and/or battery chips and lead slag and disposal off site (up to 1 foot beneath pavements and up to 2 feet in unpaved northeast area in excess of remedial action goals).
- Cap and/or backfill the areal extent of the Site with 2 feet of clean soil.

In the 1996 ROD, OU4 groundwater was deferred to be addressed as part of OU5.

Table 3 provides the remedial action goals for OU4 buildings, structures, the smelter stack, equipment and soils.

Table 3: Summary of Remedial Action Goals Established in OU4 ROD

Media	Remedial Action Goals (mg/kg)			
	Arsenic ^a	Lead ^b	Antimony	Cadmium
Industrial				
Buildings, Structures, Smelter Stack and Equipment	32.7	2,000	818 ^c	2,044 ^c
Soils	32.7	2,000	NA	NA
<i>Notes:</i> a. Remedial action goal established to achieve 1×10^{-5} risk level (for arsenic only). b. Remedial action goal corresponds to the acceptable level, as predicted by the Adult Lead Model (Appendix B of 1996 ROD). c. Remedial action goal established to achieve 1×10^{-6} risk level. NA = not a contaminant of concern for this area mg/kg = milligrams per kilogram				

OU5

EPA signed the ROD for OU5 and the groundwater portion of OU4 in April 1997. The OU5 RAOs, as provided in the ROD, were:

- Minimize exposure to lead, arsenic and antimony present in the former surface impoundment, former landfill, buildings and structures and slag burial area/other soils by direct contact, inhalation and ingestion, and reduce the potential for migration of these contaminants.

Major components of the remedy included:

- Decontamination of the former battery breaking building and the vehicle maintenance building.
- Demolition of the former battery breaking building and off-site disposal of debris.
- Evaluation of the existing cap on the former surface impoundment and cap upgrading or replacement as necessary, in order to complete RCRA closure.
- Capping of the former landfill in accordance with applicable landfill closure requirements.
- Capping of the slag burial area/other soils areas that exceed remedial action goals with 2 feet of clean backfill and revegetation with native grasses.
- No action recommended for shallow groundwater. The shallow groundwater beneath OUs 4 and 5 is not considered to be a potential drinking water supply (i.e., a Class III aquifer).⁵

Table 4 lists the remedial action goals for the OU5 former surface impoundment, former landfill, buildings and structures, and slag burial area/other soils.

Table 4: Summary of Remedial Action Goals Established in OU5 ROD

Media	Remedial Action Goals (mg/kg)		
	Arsenic ^a	Lead ^b	Antimony
Industrial			
Former Surface Impoundment, Buildings and Structures, and Slag Burial Area/Other Soils	32.7	2,000	NA
Former Landfill	32.7	2,000	818 ^c
Notes: a. Remedial action goal established to achieve 1×10^{-5} risk level (for arsenic only). b. Remedial action goal corresponds to the acceptable level, as predicted by the Adult Lead Model (Appendix B of 1997 ROD). c. Established to reduce non-cancer hazard index to less than 1. NA = not a contaminant of concern for this area mg/kg = milligrams per kilogram			

Status of Implementation

The selected remedies for OU3 Sites 1, 3 and 4 and OU5 Subareas 2, 3, and 4 were implemented through a 2003 court-approved Consent Decree agreed to by EPA, the State of Texas, RSR Corporation and its subsidiaries.

The selected remedy for OU4 was implemented through a 1998 court-approved Consent Decree agreed to by EPA and a group of seven PRPs.

EPA implemented the remedy for OU5 Subarea 1.

OU3 – Areas of Slag and Battery Chip Disposal

RSR Corporation contractors started OU3 remedial actions in February 2004 and completed major activities by September 2004.

Site 1 – Westmoreland Road Property (Figure 2)

Due to the presence of large accumulations of visible slag and battery chips on the sloped surface of Site 1, additional investigations were performed. It was determined that Site 1 was the location of a former unidentified

⁵ Groundwater at OU4 was deferred to the OU5 remedy.

landfill. Construction activities at Site 1 were divided between two general areas (southern main area and northern remote area).

In the southern area, contaminated soils and visible accumulations of slag and battery chips were excavated. Excavation was considered complete when field screening results indicated that lead and arsenic concentrations were below the field-screening concentration numbers or a depth of 2 feet below ground surface (bgs) was reached. Post-excavation confirmation samples were collected from areas where excavation depths were less than 2 feet bgs and sent to an off-site laboratory for analysis to ensure that the remedial action goals had been achieved. Each excavated area was backfilled with clean soil and then topsoil was placed on top. The backfill was graded and compacted to tie the cover into existing site grades and to promote drainage. In transition areas, additional soil was added when necessary to bring the Site to final grade and prevent the ponding of water. The Site was then seeded to establish vegetation.

In the northern remote area, soil concentrations for lead and/or arsenic that exceeded the Site 1 action levels were excavated to depths of between 6 inches and 3.5 feet. Excavation was considered complete when field-screening results indicated that lead and/or arsenic were below the field-screening concentration numbers or all visible slag and battery chips were removed. Post-excavation confirmation samples were collected from areas where excavation depths were less than 2 feet bgs and sent to an off-site laboratory for analysis to ensure that the action goals had been achieved. Excavated areas were backfilled with soil and graded as necessary to promote drainage and match surrounding natural ground levels.

Excavated soils from Site 1 were disposed of at an appropriate off-site landfill.

Site 3 – Walton Walker Property (Figure 3)

Locations where soil concentrations exceeded the Site 3 action levels and surface deposits of slag and battery chips on City of Dallas property, within the TXU Energy right-of-way, and within 100 feet of Davis Street were excavated. In these areas, soil concentrations for lead and/or arsenic exceeding the Site 3 action levels were excavated to depths of between 1 and 2 feet. Excavation was considered complete when field-screening results indicated that lead and/or arsenic were below the field-screening concentration numbers or all visible slag and battery chips were removed. Post-excavation confirmation samples were collected from the bottom of each excavation and sent to an off-site laboratory for analysis to ensure that the remedial action goals had been achieved. Excavated areas were then backfilled with soil and graded as necessary to promote drainage and match surrounding natural ground levels.

The excavated soils at Site 3 were taken to portions of Site 3 where a soil cover was to be installed for consolidation. The excavated material was spread out and compacted to the elevations required to promote drainage and prevent ponding. A soil cover consisting of a minimum of 20 inches of clay, 4 inches of topsoil, and vegetation consisting of native grasses was then placed over the consolidation areas and other areas of Site 3 requiring remediation.

Site 4 – Claibourne Boulevard Property (Figure 4)

Locations where soil concentrations exceeded the Site 4 action levels, as identified in the ROD, were covered with a 2-foot-thick soil cover consisting of clay, topsoil and vegetation consisting of native grasses.

In May 2004, an investigation at Jaycee Park assessed whether soil concentrations for lead, arsenic and antimony exceeded the action levels established in the ROD for the park. Soil samples were collected for both field screening and analysis at an off-site laboratory. The analytical results indicated that the concentrations of lead, arsenic and antimony in soils at the park did not exceed the action levels, and EPA determined that no remedial action was required at Jaycee Park.

OU4 - Former Smelter Facility (Figure 5)

RSR Corporation contractors started OU4 remedial actions in October 2000 and completed major activities by October 2001.

The remedial action construction activities for OU4 included decontamination of buildings, structures and equipment, asbestos abatement, demolition of site buildings and structures, removal of concrete foundations and pavement, excavation of contaminated soils, monitoring well abandonment, and site restoration activities. All site buildings were demolished and the resultant debris removed from the Site. Contaminated soils that exceeded the site action levels or contained visible battery chips or slag were removed through excavation and disposed of off-site. The excavations occurred to depths of 1 foot bgs in areas of the Site covered with pavement and to 2 feet bgs in the unpaved northeast corner of the Site. Existing OU4 monitoring wells were abandoned during remedial action construction.

After excavation was completed, excavated areas were backfilled with clay fill. Once the excavations were brought up to grade, the entire site was covered with 6 inches of topsoil. The topsoil was then graded to promote drainage and seeded to establish vegetation for erosion control. As a result of the remedial action, all site features were removed and/or covered.

In October 2007, EPA deleted OU4 from the NPL.

OU5 - Former Battery Breaking Facility and Other Industrial Tracts of Land (Figure 6)

Subarea 1

EPA started OU5 Subarea 1 remedial actions in January 2004 and completed major activities by July 2004.

After decontamination of the buildings, the battery breaking facility was demolished and disposed of off-site. The vehicle maintenance building was decontaminated. Soils contaminated with lead and/or arsenic above the OU5 action levels or containing visible slag were removed from the area around the vehicle maintenance building. Due to the presence of large pieces of slag in the soils around the vehicle maintenance building, planned excavation depths were increased from 6 inches to 2 feet. In a few areas, the excavations were completed to only 1.5 feet based on the depth of slag. Slag materials were also removed from the fence line north of the vehicle maintenance building, but no excavation was conducted in this area. The excavated materials were moved to the buried slag area for disposal. The excavations were backfilled with clay fill and a 6-inch topsoil cover.

Prior to work on the former surface impoundment, an investigation evaluated the thickness of the existing cap. Based on the investigation, it was determined that a sufficient 2-foot-thick cap was in place over most of the former surface impoundment. One location in the southern area of the cap required additional clay. Construction work for the former surface impoundment included regrading the cap around its perimeter to achieve a three-to-one (horizontal-to-vertical) slope, increasing the cap thickness in one area, and revegetating the cap. Geotextile and bedding rock were placed along the west toe of the former surface impoundment. A 6-inch topsoil cover was placed on top of the clay cap. The cap was then revegetated.

The buried slag area construction activities included capping the buried slag area and scraping the area to the west up to the road and/or creek bank. The area west of the buried slag area was scraped to depths between 2 and 4 inches to remove large accumulations of battery chips. The scraped material was placed in the buried slag area. The area was then regraded to promote drainage and topsoil was placed on top. The materials placed in the buried slag area included soils excavated from other portions of the Site, sediments from the former loading dock, site sumps, the scraped area west of the buried slag area and near the underground storage tanks, sediments from the water tanks, and materials removed from near the vehicle maintenance facility. An 18-inch-thick clay cap was placed on top of the buried slag area and covered with 6 inches of topsoil. The buried slag area was then revegetated. Riprap protection was placed on the northern bank of the drainage swale adjacent to the buried slag area and on select portions of the southern bank. This work was done to repair areas of erosion and reduce the potential for future erosion into the buried waste in the buried slag area.

A closed surface impoundment, the former vehicle maintenance facility, a buried slag disposal area and remaining building foundations are present on Subarea 1.

In October 2007, EPA deleted OU5 Subarea 1 from the NPL.

Subareas 2, 3 and 4

RSR Corporation contractors started OU5 Subareas 2, 3 and 4 remedial actions in June 2003 and completed major activities by October 2003.

Subarea 2

At OU5 Subarea 2, remediation of contaminated soils was addressed through excavation and consolidation within the former landfill area by expanding the landfill cover for areas near the landfill or by installing a cover (similar to the one placed over the landfill) over the areas of contaminated soils, as well as consolidating soils excavated from remote areas in the former landfill area. The former landfill and nearby impacted areas were covered with clean clay. The landfill cover was graded and tied into the existing site grades to promote drainage and prevent the ponding of water. Topsoil was then placed on top of the former landfill cover and seeded to establish vegetation consisting of native grasses. A similar cover was constructed over contaminated soil areas in the northern portion of OU5 Subarea 2. Additional material was added to unimpacted areas of OU5 Subarea 2 to bring the subarea to final grade, promote drainage and prevent ponding of water.

Subarea 3

EPA determined that remediation was not required for OU5 Subarea 3. The determination was based on soil sampling results.

Subarea 4

An investigation was conducted at OU5 Subarea 4 to identify areas where soil lead and arsenic concentrations exceeded site action levels. In addition to the originally defined Subarea 4 (later changed to Subarea 4A), RSR Corporation voluntarily addressed two adjacent properties as part of the OU5 remediation (identified as Subareas 4B and 4C). Contaminated soils exceeding remedial action levels were excavated. Excavation depths ranged from 0.25 to 0.66 feet bgs. Confirmation sampling ensured that the action levels were achieved at each excavated area. Excavated soils were transported to the former landfill at OU5 Subarea 2 and placed under the final cover. Each excavated area was backfilled with topsoil and seeded to establish vegetation consisting of native grasses.

Institutional Control (IC) Review

The OU3 ROD required Institutional Controls (ICs) in the form of deed notices and restrictions. The OU3 ROD stated that the selected remedy would achieve cleanup levels that allow most, if not all, of the OU3 Sites to be available for the reasonably anticipated future use of industrial land use (Sites 3 and 4) or residential use (Site 1). The OU3 2005 Operation & Maintenance (O&M) Plan indicated deed notices were to include the locations of the soil covers present at each site, a restriction requiring that the soil covers must be maintained during future uses, and a restriction requiring EPA review and approval for any future development.

The 2003 Consent Decree requires deed notices be filed on properties within OU5 Subarea 2, 3 and 4. Additionally, the 2005 FYR identified and called for ICs on OU4 and OU5 because waste was left in place above levels that allow for UU/UE and the cleanup was anticipated to allow for industrial use in the RODs. However, as stated in the Status of Implementation section, OU5 Subarea 3 did not require remedial action, and therefore no ICs are required to be recorded on those properties.

For this FYR report, EPA's contractor researched site-related ICs documents filed with Dallas County as well as site parcel information on the Dallas Central Appraisal District website. This information was used to determine which parcels within OUs 3, 4 and 5 had IC instruments on record and which parcels still needed ICs to ensure protective land use. Twenty-five OU3 properties currently have deed notices that restricts disturbance of the remedy. OU4 has a 2006 Restrictive Covenant in place to restrict disturbing capped areas in place without EPA approval. A portion of OU4 was recently redeveloped into a gas station and convenience store following EPA approving the Soil Management Plan and performing several site visits during construction. OU5 Subarea 1 has a

2006 Restrictive Covenant in place to restrict disturbing capped areas in place without EPA approval (Table 5, Figures 2—6). The new owner, Dallas Barricade & Lite, is constructing its headquarters at the site and is re-grading the buried slag area with EPA’s approval and oversight. No deed notices have been recorded on any properties within OU5 Subareas 2, 3 and 4.

ICs have not yet been filed for all impacted properties where contamination or smelter waste may be encountered at depth and/or the land use is limited to industrial (Tables 6 and 7). This FYR report recommends that EPA determine the necessary ICs and work with RSR and property owners to implement them.

Groundwater ICs are not needed since shallow groundwater at the Site is not generally considered a water supply aquifer.

Table 5: Summary of Implemented Institutional Controls (ICs)

Media, Engineered Controls, and Areas That Do Not Support UU/UE Based on Current Conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
OU3 Site 1 Soil	Yes	Yes	See Figure 2	Restrict remedy disturbance.	2008 Deed Restriction on: 00000306976000100 (Does not cover entire soil cover area. A portion of parcel 00000306976000500 is capped with no IC)
OU3 Site 3 Soil	Yes	Yes	See Figure 3	Restrict use to commercial or industrial use. Restrict remedy disturbance.	2013 Deed Notice on: 00000802960000000
					2016 Deed Restriction on: 00833400000160000 00000802963000000
OU3 Site 4 Soil	Yes	Yes	See Figure 4	Restrict use to commercial or industrial use. Restrict remedy disturbance.	2010 Deed Notices on: 00000693961000000 00000693958000000 00000693955000000 00000693952000000 00000693949000000 00000694093000000 00000694096000000 00000694309000000 00000694315000000 00000694318000000 00000694312000000 00000694084000000 00000694000000000 00000694003000000 00000694006000000 00000694009000000 00000694012000000 00000694015000000 00000694018000000 00000694324000000 00000694321000000

Media, Engineered Controls, and Areas That Do Not Support UU/UE Based on Current Conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
OU4 Soil	Yes	No	See Figure 5	Restrict use to commercial or industrial use. Restrict remedy disturbance.	2006 Restrictive Covenant on: 00000700771000100 00000700771000000
OU5 Subarea 1 Soil	Yes	No	See Figure 6	Restrict use to commercial or industrial use. Restrict remedy disturbance, including buried slag area and former surface impoundment.	2006 Restrictive Covenant on OU5 Subarea 1: 00000700594000000
OU5 Subareas 2-4 Soil	Yes	No*	See Figure 6	Restrict use to commercial or industrial use. Restrict remedy disturbance.	None
*ICs are not explicitly addressed in the OU5 ROD, but deed notices are required to be placed on OU5 Subareas 2, 3, and 4 pursuant to the 2003 Consent Decree (Notice of Obligations to Successors-in-Title). OU5 Subarea 3 will not require deed notices because remediation was not necessary for Subarea 3.					

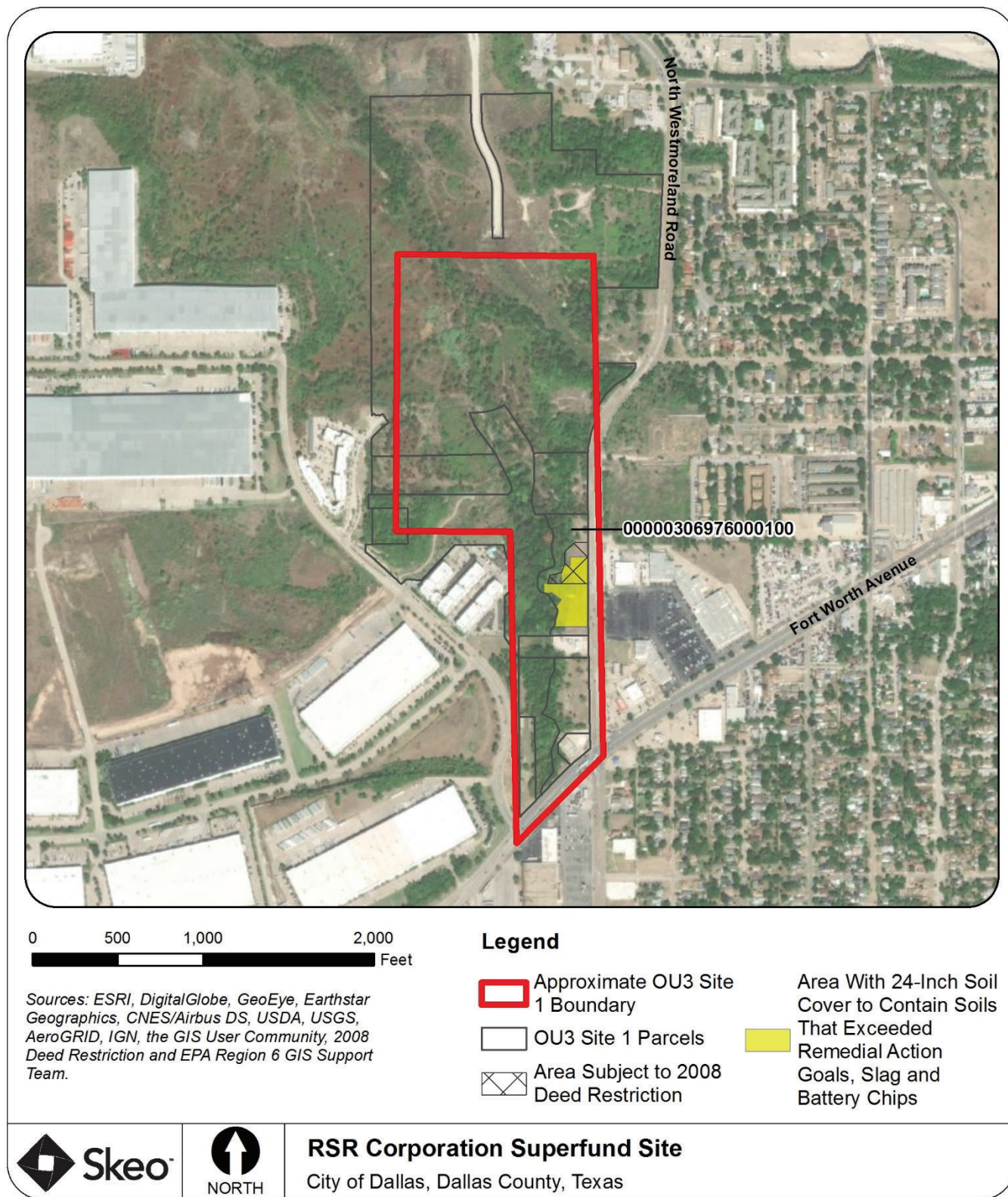
Table 6: Summary of OU3 Parcels with 24-Inch Soil Cover Areas that Require ICs

OU3 Site	Parcel Number	OU3 Site	Parcel Number
Site 3	00000802948000000	Site 4	00000694081000000
Site 3	00000802951000000	Site 4	00000694111000000
Site 3	00000802945000000	Site 4	00000694327000000
Site 4	00000693967000000	Site 4	00000694066000000
Site 4	00000694060000000	Site 4	00000693964000000
Site 4	00000693994000000	Site 4	00000693997000000
Site 4	00000694063000000	Site 4	00000694099000000
Site 4	00000694078000000		
<p><i>Notes:</i> Parcels listed have a soil cover over soils exceeding remedial action goals or deposits of slag and battery chips.</p> <p>Dallas Central Appraisal District account information available online at: http://www.dallascad.org/SearchAcct.aspx</p> <p>ICs are planned for parcels where they have yet to be implemented</p>			

Table 7: Summary of OU5 Parcels that Require ICs

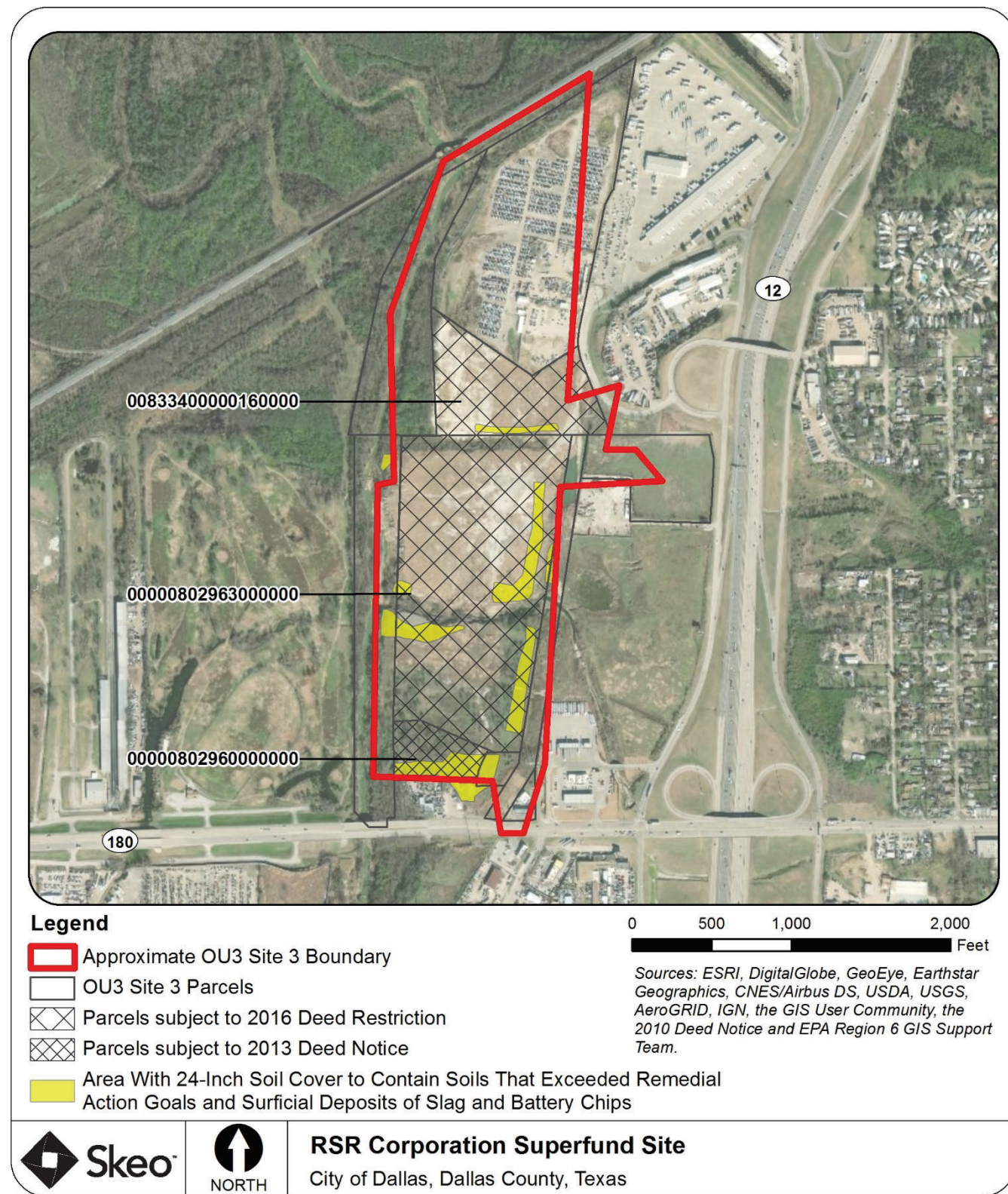
OU5 Subarea	Parcel Number	OU5 Subarea	Parcel Number
Subarea 2	00000700267250000	Subarea 2	00000700459000000
Subarea 2	00000700267700000	Subarea 2	00000700462000000
Subarea 2	00000700297000000	Subarea 2	00000700465000000
Subarea 2	00000700300000000	Subarea 2	00000700468000000
Subarea 2	00000700318000000	Subarea 2	00000700471000000
Subarea 2	00000700321000000	Subarea 2	00000700474000000
Subarea 2	00000700324000000	Subarea 2	00000700402000000
Subarea 2	00000700327000000	Subarea 2	00000700405000000
Subarea 2	00000700330000000	Subarea 2	00000700408000000
Subarea 2	00000700333000000	Subarea 2	00000700411000000
Subarea 2	00000700336000000	Subarea 2	00000700414000000
Subarea 2	00000700339000000	Subarea 2	00000700456000000
Subarea 2	00000700342000000	Subarea 2	00000700516000000
Subarea 2	00000700345000000	Subarea 2	00000700519000000
Subarea 2	00000700348000000	Subarea 2	00000700522000000
Subarea 2	00000700351000000	Subarea 2	00000700525000000
Subarea 2	00000700354000000	Subarea 2	00000700528000000
Subarea 2	00000700378000000	Subarea 2	00000700531000000
Subarea 2	00000700381000000	Subarea 2	00000700534000000
Subarea 2	00000700384000000	Subarea 2	00000700537000000
Subarea 2	00000700387000000	Subarea 2	00000700540000000
Subarea 2	00000700390000000	Subarea 2	00000700546000000
Subarea 2	00000700393000000	Subarea 2	00000700555000000
Subarea 2	00000700396000000	Subarea 2	00000700595000000
Subarea 2	00000700399000000	Subareas 4A-C	00000700753000000
<p><i>Notes:</i> Dallas Central Appraisal District account information available online at: http://www.dallascad.org/SearchAcct.aspx ICs are planned for parcels where they have yet to be implemented</p>			

Figure 2: OU3 Site 1 Institutional Control Map



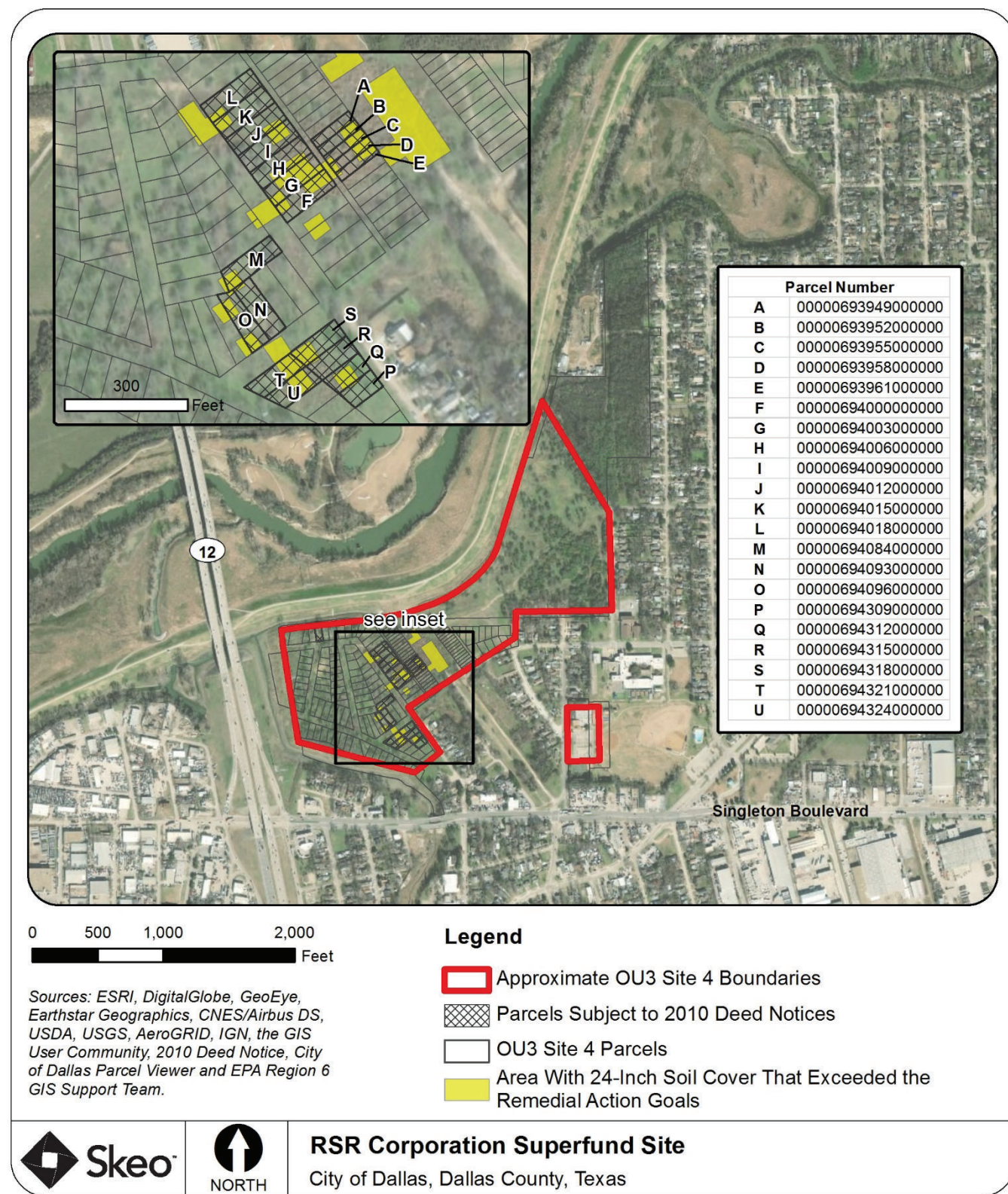
Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Figure 3: OU3 Site 3 Institutional Control Map



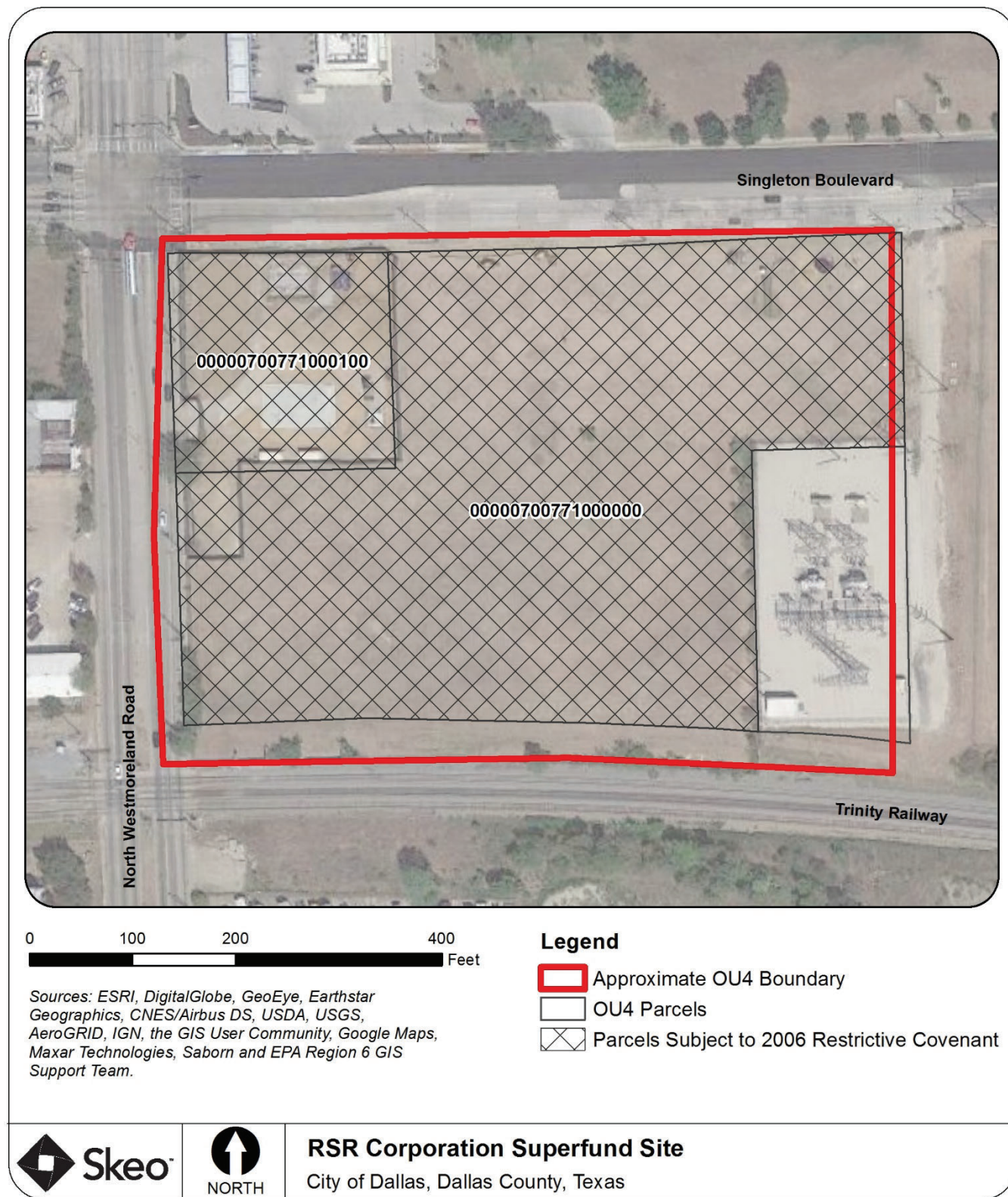
Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Figure 4: OU3 Site 4 Institutional Control Map



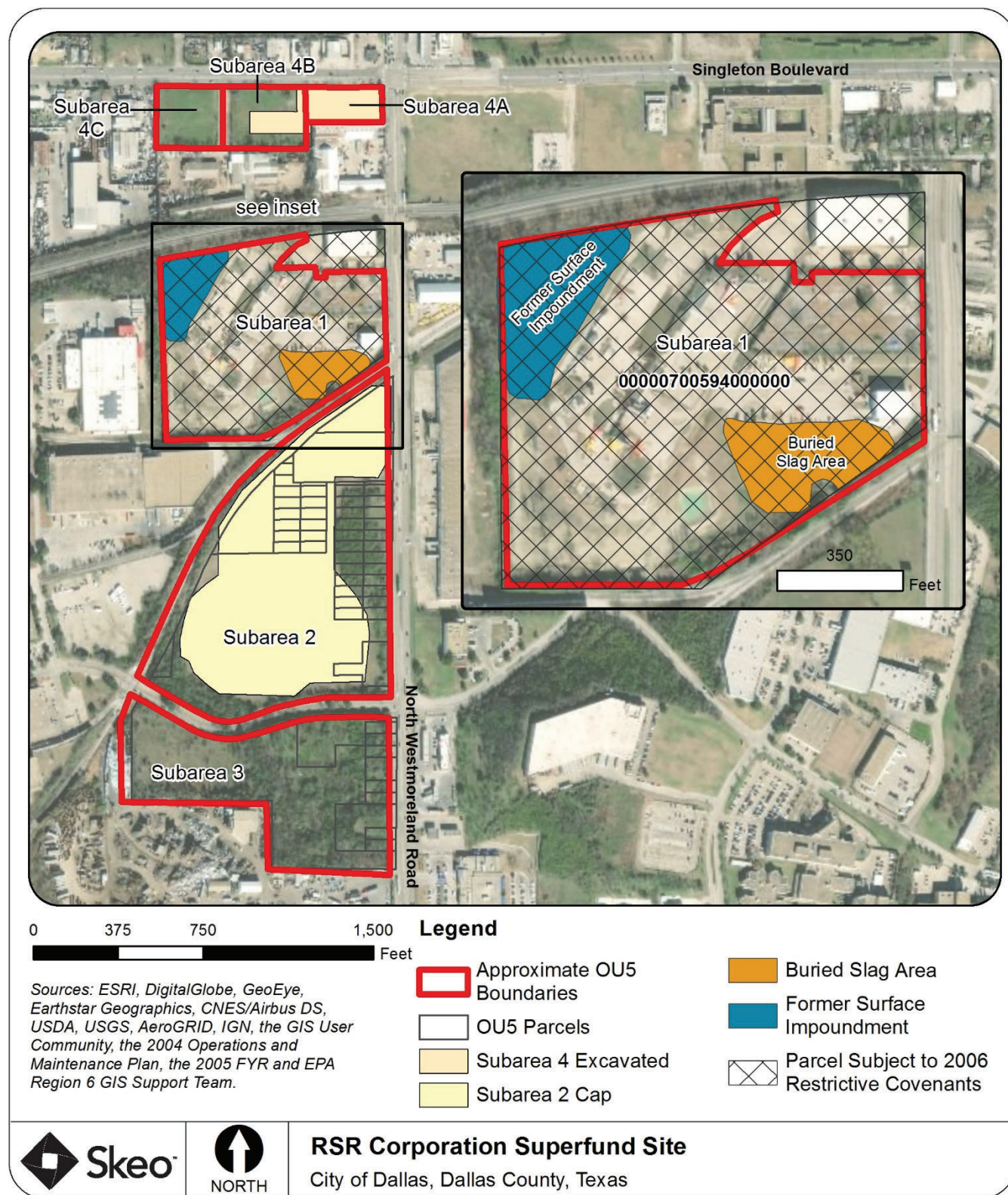
Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Figure 5: OU4 Institutional Control Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Figure 6: OU5 Institutional Control Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Systems Operations/Operation and Maintenance (O&M)

O&M Plans were developed by ENTACT (PRP contractor) that specify the general O&M activities to be conducted at OU3 (2005 O&M Plan) and OU5 Subareas 2, 3 and 4 (2003 O&M Plan). EPA contractors developed the 2004 O&M Plan for OU5 Subarea 1. Table 8 shows required O&M activities and responsible parties for each site area.

Table 8: O&M Responsibility by Area

Area	Party Responsible for O&M	Required O&M Activities
OU3 Site 1	RSR Corporation	O&M activities for OU3 include inspection and maintenance of the soil covers at the three sites. The O&M Plan states that inspections of the soil covers at each site will be conducted annually. The soil covers are to be inspected for signs of erosion, subsidence, areas lacking vegetation, animal burrows, and other conditions that might affect the integrity of the soil covers. The O&M Plan stipulates that corrective actions would be implemented to repair/correct noted deficiencies that present significant risk to the integrity of the covers. The only required maintenance activities include mowing, watering and reseeding on an as-needed basis.
OU3 Site 3	RSR Corporation	
OU3 Site 4	RSR Corporation	
OU4	The ROD did not require any O&M activities for the OU4 remedy.	None
OU5 Subarea 1	Formerly Murmur	O&M activities for Subarea 1 include inspection and maintenance of the covers over the buried slag area and former surface impoundment, the excavated/scraped areas, the drainage swale along the southern property boundary, and the vehicle maintenance facility parking lot.
OU5 Subarea 2	RSR Corporation	O&M activities for Subarea 2 include inspection and maintenance of the former landfill and north area soil covers. The O&M Plan states that inspections of the soil covers would be conducted quarterly for the first year and annually thereafter. The soil covers are to be inspected for signs of erosion, subsidence, areas lacking vegetation, animal burrows and other conditions that might affect the integrity of the soil covers. The O&M Plan stipulates that corrective actions would be implemented to repair/correct noted deficiencies that present significant risk to the integrity of the covers. The only required maintenance activities include mowing, watering and reseeding on an as-needed basis. The fence around Subarea 2 would also be inspected and maintained to restrict access to the Site.
OU5 Subarea 3	RSR Corporation	The O&M Plan indicates that O&M activities are not required for Subareas 3 and 4.
OU5 Subarea 4	RSR Corporation	

PRP contractors, EPA and TCEQ representatives perform annual inspections of OU3 Sites 1 and 4 and OU5 Subareas 2 and 4. Annual O&M reports from 2015 to 2017 noted small areas of erosion and fence breaches, which were addressed as needed. The OU5 Subarea 4 2018 memorandum noted cleanup, tree removal and fence and lock repairs that were taken care of by RSR.

III. PROGRESS SINCE THE PREVIOUS REVIEW

This section includes the protectiveness determinations and statements from the previous FYR as well as the recommendations from the previous FYR and the status of those recommendations.

Table 9: Protectiveness Determinations/Statements from the 2015 FYR

OU #	Protectiveness Determination	Protectiveness Statement
3	Short-term Protective	The remedy at OU3 is protective of human health and the environment in the short term. However, in order for the remedy to be protective in the long term, missing deed notices should be filed for impacted properties. Additionally, development activities noted within Site 3 should be reviewed by EPA to ensure they are compatible with the remedy and do not result in any unacceptable risks to site workers.
4	Protective	The remedy at OU4 is protective of human health and the environment.
5	Protective	The remedy at OU5 is protective of human health and the environment and will remain so provided the action items identified in the FYR Report are addressed.

Table 10: Status of Recommendations from the 2015 FYR

OU #	Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date (if applicable)
OU5 Subarea 1	The O&M Plan for OU5 Subarea 1 called for annual groundwater monitoring for a period of five years following completion of the remedial action. One round of monitoring was performed in 2004.	Based on groundwater sampling and analyses, and since the shallow water bearing zone is considered a "Class 3" aquifer, not a drinking water source, no further groundwater monitoring is necessary. The monitor wells should be plugged.	Completed	EPA contractors plugged and abandoned the remaining 11 wells at OU5 Subarea 1.	10/17/2017
OU5 Subarea 1	A large bush growing on the north part of the consolidation area threatens the integrity of the soil cap.	Remove the bush to preserve the integrity of the soil cap. Maintain the soil cap to prevent vegetation from compromising protectiveness of the remedy.	Completed	The cap was observed to be in good condition with no bushes during the FYR site inspection.	11/20/2019
OU5 Subarea 2	Erosion at the toe of the cover on the western edge of OU5 Subarea 2 may extend toward the cover and threaten remedy protectiveness.	Continue to monitor the area and implement repairs before protectiveness of the remedy is affected.	Completed	The PRP contractors placed about 32 tons of common fill material and 22 tons of riprap to provide erosion protection.	1/16/2015
OU3 Sites 3 and 4	Deed notices have not been filed for seven impacted properties, one of which is currently being developed for use.	Work with property owners to ensure that deed notices are filed and that development activities do not impact protectiveness of the remedy.	Ongoing	Two deed notices were filed in October 2016. EPA will determine institutional controls necessary and work with property owners to implement.	NA

OU #	Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date (if applicable)
OU3 and OU5	Portions of fencing within OU3 and OU5 are damaged.	Access control measures should be monitored and repaired as needed to discourage trespassing.	Completed	Fencing was added to OU3 Site 1. During the FYR site inspection, fencing at OU3 Site 3 was observed to be incomplete and damaged, but it is not a required remedial feature. Fencing at OU5 was intact.	1/16/2015

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Community Involvement and Site Interviews

A public notice was made available by a newspaper posting in *The Dallas Morning News* on Dec. 4, 2019. Appendix C). It stated that the FYR was underway and invited the public to submit any comments to EPA. The results of the review and the report will be made available at the Site's information repository, located at EPA Region 6's office at 1201 Elm Street, Dallas, Texas 75270.

During the FYR process, interviews were conducted to document any perceived problems or successes with the remedy implemented to date. Completed TCEQ, PRP and PRP contractor interview forms are available in Appendix G. The interviews are summarized below.

Kenan Nerad (TCEQ) indicated that cleanup activities were appropriate for the project and that remedies in place appear to be effective in protecting human health. Mr. Nerad stated that TCEQ has had various requests from the public over the last five years, including: a schoolteacher wishing to construct a school garden requested information; a consultant performing a Phase 1 environmental site assessment requested a map of the OUs to determine if their property was within the boundaries; a consultant conducting a Phase 1 environmental site assessment requested remedial investigation reports for OU1; a Dallas News article was published which described the discovery of uncovered contaminated soils at the 7-Eleven during construction; a middle school baseball coach inquired about potential health risk players may face when sliding into dirt; and a legislative inquiry about the Site. TCEQ responded to all inquiries about the Site.

Kelsey Hein (RSR Corporation) asserted that the remedial activities function as intended and are protective of human health and the environment. Ms. Hein indicated that RSR properties are well maintained and construction in surrounding areas has increased. Jenny Self (PRP contractor ENTACT) concurred with RSR's opinion that the remedy is protective of human health and the environment and that remediation of the Site has allowed additional development in the area in support of community needs.

EPA staff conducted in-person interviews with local residents. Although this is the fourth FYR, residents continue to be concerned about whether it is safe for children to play outdoors. Residents are also concerned about whether vegetables grown in home gardens are safe to eat. The residents interviewed were aware of the former environmental issues at the Site and the cleanup activities that have taken place to date. However, community members are not aware of site activities or redevelopment in the community and are concerned about not being informed or involved in redevelopment. Residents are also concerned about minority contractors not being offered or awarded opportunities in the redevelopment in the community. Resident concerns are also focused on exposure to lead from the smelter that may have caused health problems in the community and learning disabilities in children. The community is pleased with the overall impression of the project. The residents do not feel they understand how the Site is safe to the community. The residents do not feel EPA has kept them involved or informed about activities at the Site. Residents also have concerns about EPA involving the community when briefing elected officials or updating other community leaders about redevelopment in the community.

Data Review

Data are no longer collected at the Site.

Site Inspection

The site inspection took place on Nov. 20, 2019. Site inspection participants included Casey Luckett Snyder (EPA), Hope Schroeder (EPA), Janetta Coats (EPA), Johnny Zimmerman-Ward (Skeo), Eric Marsh (Skeo), Jenny Self (ENTACT), Kelsey Hein (RSR Corporation) and Kenan Nerad (TCEQ). The purpose of the inspection was to assess the protectiveness of the remedy. The completed checklist and site inspection photographs are available in appendices D and E, respectively.

Site inspection participants met at OU2 to discuss the Site. Site inspection participants then went on to observe the following site locations:

- OU3 Site 1: New fencing was observed in this area, although it is not a requirement of the remedy. Much of the area is well-vegetated with grass.
- OU3 Site 3: Parts of this OU are in use as an auto junkyard and metal recycling facility. A gas station was also observed on the southernmost part of the area. Much of the area is vegetated with grasses and shrubs. This area had a TCEQ permit sign at the gate.
- OU3 Site 4: Some illegal dumping was found along the edges of the OU. The OU is mostly vegetated with grasses and bushes.
- OU4: The new gas station and convenience store were observed. Most of the OU is vegetated with grass.
- OU5 Subarea 1: A business has purchased this property and is in the process of upgrading it for business operations. The buried slag area will be uncovered, regraded to accommodate vehicle traffic and re-covered. The former surface impoundment at the back of the property will remain buried as is. The property is well secured with electric fencing and locked gates.
- OU5 Subarea 2: This landfill area was found to be well-secured with locked fencing and well-vegetated. The area at the eastern toe that ENTACT had reinforced with concrete and riprap to prevent erosion was observed and in good condition.
- OU5 Subareas 4 A, B, C: This area was found to be well-vegetated and secured with fencing.

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

Question A Summary:

The remedy is functioning as intended by the decision documents.

At OU3 Site 1, contaminated soils, slag and battery chips were excavated and disposed of off-site; contaminated soils or visible slag and battery chips at depths of more than 2 feet were covered with a 2-foot soil cover and vegetated. At OU3 Site 3, excavated soils were consolidated and capped. At OU3 Site 4, soils exceeding action levels were covered with a 2-foot soil cover and vegetated. An assessment of Jaycee Park in 2004 determined that concentrations of lead, arsenic, and antimony in the soils at the park did not exceed action levels, and no remedial action was required. The soil and clay cover component of the OU3 remedy are intact and functioning.

At OU4, all site buildings were demolished and the resultant debris removed from the Site. Contaminated soils that exceeded the site action levels or contained visible battery chips or slag were removed through excavation and disposed of off-site. The excavations occurred to depths of 1 foot bgs in areas of the Site covered with pavement and to 2 feet bgs in the unpaved northeast corner of the Site. The excavations were backfilled and vegetated. The soil and clay cover component of the OU4 remedy are intact and functioning.

At OU5 Subarea 1, some buildings were demolished and disposed of off-site. The remaining vehicle maintenance building was decontaminated. Excavated soils and slag were moved to the buried slag area for disposal. This disposal area is in the process of being reworked to expand the existing parking lot. The footprint of the original area remains. Material removed from the top of this original disposal area is being placed in an adjacent clean pit which will be capped. This work is being conducted pursuant to EPA approved plans. The former surface impoundment remains on OU5 Subarea 1. At OU5 Subarea 2, remediation of contaminated soils was addressed through excavation and consolidation within the former landfill area by expanding the landfill cover for areas near the landfill or by installing a cover (similar to the one placed over the landfill) over the areas of contaminated soils. At OU5 Subarea 4, contaminated soils were excavated and transported to the former landfill at OU5 Subarea 2 and placed under the final cover. The soil and clay cover component of the OU5 Subarea 2 remedy are intact and functioning.

RSR Corporation is responsible for O&M activities conducted for the OU3 Sites 1, 3 and 4 and OU5 Subareas 2, 3 and 4 remedies. The PRP contractors perform annual inspections and address issues as needed. During the FYR site inspection, OU3 Sites 3 and 4 were observed to be overgrown; the 2005 OU3 O&M Plan indicates that maintenance of the vegetative covers will include mowing on an as needed basis to maintain the remedy.

Dallas Lite and Barricade is responsible for O&M activities conducted for the OU5 Subarea 1 remedy. Dallas Lite and Barricade is re-grading the buried slag area to allow for additional vehicle parking areas required for the new business being constructed on site. EPA is conducting oversight of the re-grading activities to ensure that the remedy remains protective.

The OU3 ROD stated that the selected remedy would achieve cleanup levels that allow most, if not all, of the OU3 Sites to be available for the reasonably anticipated future use of industrial land use (Sites 3 and 4) or residential use (Site 1). ICs are required for OU5 pursuant to the 2003 Consent Decree and ICs were called for in the 2005 FYR on OU4 and OU5 because waste was left in place and the ROD remedial action goals limit protective future use to industrial use. Since that time, ICs are in place for some but not all impacted properties. EPA will work with RSR and the property owners to implement institutional controls on remaining impacted properties.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels and RAOs used at the time of the remedy selection still valid?

Question B Summary:

Exposure assumptions and RAOs used at the time of remedy selection are still valid. Soil cleanup goals in the RODs were compared to EPA's soil regional screening levels (RSLs) (Appendix F). The OU3 ROD residential cleanup goal for antimony is above the target noncancer hazard quotient (HQ) of 1 (Table F-1). The ROD industrial cleanup goals for antimony and cadmium are above the target noncancer hazard HQ of 1 (Table F-3). Most areas of the Site were backfilled with clean soils after excavation, soil contamination levels may remain at depth and require institutional controls for long-term protectiveness.

According to the OU3 ROD, the lead cleanup goal of 500 mg/kg was based on residential risk-based calculations. According to the OU3 ROD, the 2,000 mg/kg lead cleanup goal was based on an Adult Lead Model that used the geometric mean value for lead to predict blood-lead levels in exposed workers. According to the OU4 and OU5 RODs, the lead cleanup goal of 2,000 mg/kg was based on input of site-specific data into the Adult Lead Exposure Model (Appendix B of OU4 and OU5 RODs). None of these cleanup levels have changed during this FYR. EPA is in the process of updating its lead cleanup policy. EPA Region 6 will continue to use the current EPA policy until the Agency finalizes and updates its policy, at which time the protectiveness of the remedy will be re-evaluated.

QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?

No other information has come to light that could call into question the protectiveness of the remedy.

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations	
OU(s) without Issues/Recommendations Identified in the FYR:	
OU4	

Issues and Recommendations Identified in the FYR:

OU3	Issue Category: Institutional Controls			
	Issue: Institutional controls have not been implemented on 15OU3 property parcels where waste is left in place or completed cleanups exceed remedial action goals and use limitations are necessary to be protective.			
	Recommendation: Implement institutional controls on 15 identified property parcels which were previously remediated but where institutional controls are lacking. (See Table 6 for specific property parcels.)			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	Yes	PRP	EPA/State	6/15/2023

OU5	Issue Category: Institutional Controls			
	Issue: The 2003 Consent Decree requires that deed notices be filed on OU5 Subareas 2, 3 and 4 properties. EPA's 2020 Dallas County property records search shows that no notices are recorded on any OU5 Subarea 2, 3 and 4 properties.			
	Recommendation: File deed notices on OU5 properties as required by the 2003 Consent Decree, and include language in the deed notices that limits the protective use on the properties to industrial uses.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	Yes	PRP	EPA/State	6/15/2023

OU3 and OU5	Issue Category: Operations and Maintenance			
	Issue: Annual O&M activities have not been implemented at some portions of OU3 and OU5.			
	Recommendation: Reevaluate approved O&M plans and determine if O&M plan modifications are needed to ensure continued protectiveness of the remedy at each OU.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	Yes	EPA/PRP	EPA/State	6/15/2023

OTHER FINDINGS

Three additional recommendations were identified during the FYR. These recommendations do not affect current and/or future protectiveness.

- During the FYR interview process, residents raised concerns about communications with EPA about the Site. EPA will work to provide community members more information about the Site.

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement	
<i>Operable Unit:3</i>	<i>Protectiveness Determination:</i> Short-term Protective
<i>Protectiveness Statement:</i> The remedy at OU3 currently protects human health and the environment because contaminated soils, slag and battery chips were excavated or covered in place and some institutional controls are in place to restrict land use. However, for the remedy to protective in the long term, the following actions need to be taken: <ul style="list-style-type: none"> - Implement institutional controls on all 15 identified property parcels which were previously remediated but where institutional controls are lacking. - Reevaluate approved O&M plans and determine if O&M plan modifications are needed to ensure continued protectiveness of the remedy. 	

Protectiveness Statement	
<i>Operable Unit:4</i>	<i>Protectiveness Determination:</i> Protective
<i>Protectiveness Statement:</i> The remedy at OU4 protects human health and the environment because contaminated buildings were demolished and removed, contaminated soils, slag and battery chips were excavated or covered in place, and institutional controls are in place to restrict land use.	

Protectiveness Statement	
<i>Operable Unit:5</i>	<i>Protectiveness Determination:</i> Short-term Protective
<i>Protectiveness Statement:</i> The remedy at OU5 currently protects human health and the environment because contaminated buildings were demolished and removed, contaminated soils, slag and battery chips were excavated or covered in place, and some institutional controls are in place to restrict land use. However, for the remedy to protective in the long term, the following actions need to be taken: <ul style="list-style-type: none"> - Implement institutional controls on OU5 properties as required by the 2003 Consent Decree and include language in the deed notices that states the remedial action limits the protective use on the properties to industrial uses. - Reevaluate approved O&M plans and determine if O&M plan modifications are needed to ensure continued protectiveness of the remedy. 	

Sitewide Protectiveness Statement	
	<i>Protectiveness Determination:</i> Short-term Protective
<i>Protectiveness Statement:</i> Because the remedy is protective in the short-term at OUs 3 and 5, the sitewide remedy is currently protective. However, in order for the remedy to protective in the long- term, the following actions need to be taken: <ul style="list-style-type: none"> - Implement institutional controls on all 15 identified property parcels which were previously remediated but where institutional controls are lacking. (OU3). - Implement institutional controls on OU5 properties as required per the 2003 Consent Decree and include language in the deed notices that states the remedial action limits the protective use on the properties to industrial uses (OU5). - Reevaluate approved O&M plans and determine if O&M plan modifications are needed to ensure continued protectiveness of the remedy (OU3 and OU5). 	

VIII. NEXT REVIEW

The next FYR Report for the RSR Corporation Superfund site is required five years from the completion date of this review.

APPENDIX A – REFERENCE LIST

Erosion Rill Repairs, RSR Corporation Superfund Site, Operable Unit 5, Subarea 2, Dallas, Texas. Prepared by ENTACT. January 26, 2015.

Final Close-Out Report for RSR OU4 Superfund Site. Dallas, Texas. Prepared by ENTACT. December 7, 2001.

Final Operation and Maintenance Plan, RSR Corporation Superfund Site, Operable Unit No. 3, Sites 1, 3 and 4. Dallas, Texas. Prepared by ENTACT. February 15, 2005.

Final Operation and Maintenance Plan, RSR Corporation Superfund Site, Operable Unit No. 5, Subareas 2, 3 and 4. Dallas, Texas. Prepared by ENTACT. December 16, 2003.

Final Remedial Action Report, RSR Corporate Superfund Site, Operable Unit 3, Sites 1, 3 and 4. Dallas Texas. Prepared by ENTACT. November 9, 2004.

First Five-Year Review Report for the RSR Corporation Superfund Site, Dallas, Dallas County, Texas. Prepared by U.S. Environmental Protection Agency. September 29, 2005.

Operations and Maintenance Plan, RSR Corporation Superfund Site, Operable Unit No. 5, Subarea 1, Dallas County, Dallas, Texas. Prepared by CH2M HILL. September 2004.

Plugging Completion Report, Technical Assistance, RSR Corporation Superfund Site, Operable Unit No. 5, Subarea No. 1, Dallas, Dallas County, Texas. Prepared by EA Engineering, Science, and Technology, Inc., PBC. December 2017.

Preliminary Close Out Report, RSR Corporation, Superfund Site, Dallas, Texas. Prepared by U.S. Environmental Protection Agency. September 2004.

Record of Decision, RSR Corporation Superfund Site Operable Unit No. 1 – Residential Property, Dallas, Texas. Prepared by U.S. Environmental Protection Agency. May 9, 1995.

Record of Decision, RSR Corporation Superfund Site Operable Unit No. 2 – DHA Property, Dallas, Texas. Prepared by U.S. Environmental Protection Agency. May 9, 1995.

Record of Decision, RSR Corporation Superfund Site Operable Unit No. 3 Landfills and Slag Piles, Dallas, Texas. Prepared by U.S. Environmental Protection Agency. September 30, 1997.

Record of Decision, RSR Corporation Superfund Site Operable Unit No. 4 – Smelter Facility, Dallas, Texas. Prepared by U.S. Environmental Protection Agency. February 28, 1996.

Record of Decision, RSR Corporation Superfund Site, Operable Unit No. 5 Battery Wrecking Facility and Ground Water Portion of Operable Unit No. 4, Smelter Facility, Dallas, Texas. Prepared by U.S. Environmental Protection Agency. April 3, 1997.

RSR OU3 and OU5 Annual Inspections. Prepared by ENTACT. December 13, 2017.

RSR OU3 and OU5 Annual Inspections. Prepared by ENTACT. December 17, 2014.

RSR OU3 and OU5 Annual Inspections. Prepared by ENTACT. January 9, 2017.

RSR OU3 and OU5 Annual Inspections. Prepared by ENTACT. January 14, 2016.

Second Five-Year Review Report for the RSR Corporation Superfund Site. Dallas, Dallas County, Texas. Prepared by U.S. Environmental Protection Agency. September 21, 2010.

Third Five-Year Review for RSR Corporation Superfund Site. Dallas County, Texas. Prepared by U.S. Environmental Protection Agency. September 1, 2015.

APPENDIX B – SITE CHRONOLOGY

Table B-1: Site Chronology

Event	Date
Murph Metals began battery breaking and smelting operations at the Site	1934
RSR Corporation acquired the Site and continued operations	1971
The city of Dallas declined to renew the facility's operating permit; operations stopped	1984
The PRPs funded cleanup of area within a half-mile of the smelter facility	1984 – 1985
EPA conducted an emergency removal action at OU1	October 1991 – June 1994
EPA proposed the Site for inclusion on the NPL	May 10, 1993
EPA initiated the RI/FS for OU3	July 1993
EPA initiated the RI/FS for OUs 4 and 5	Spring 1994
DHA began building demolition and removal of lead-contaminated materials and soils for OU2	July 1994
DHA completed cleanup activities for OU2	March 1995
EPA signed RODs for OUs 1 and 2	May 9, 1995
EPA conducted a non-time-critical removal action to remove waste drums, waste piles and waste laboratory chemicals from OUs 4 and 5	May – July 1995
EPA finalized the Site's listing on the NPL	September 29, 1995
EPA signed the ROD for OU4	February 28, 1996
EPA completed the RI/FS for OU5	April 1996
EPA completed the RI/FS for OU3	Early 1997
EPA completed the remedial design for the OU4 remedial action	Spring 1997
EPA signed the ROD for OU5 and the groundwater portion of OU4	April 3, 1997
EPA signed the ROD for OU3	September 20, 1997
EPA and seven PRPs agreed to OU4 Consent Decree	1998
The U. S. District Court approved the Consent Decree for OU4	June 22, 2000
EPA conducted the final inspection of the remedial action for OU4	November 6, 2001
PRPs completed the remedial action for OU4 and EPA completed the remedial design for OU5 Subarea 1	December 2001
EPA entered into a Consent Decree with RSR Corporation	April 15, 2003
PRPs began construction activities for OU5 Subareas 2, 3 and 4	June 2003
The court entered into a Consent Decree for OU3 and OU5 Subareas 2, 3 and 4	July 21, 2003
PRPs completed the remedial action for OU5 Subareas 2, 3 and 4	October 2003
PRPs completed remedial action construction activities for OU5 Subarea 1	July 2004
PRPs completed the remedial action for OU3	August 2004
EPA and TCEQ conducted the final inspection of the OU5 Subarea 1 remedial action	August 3, 2004
EPA completed the remedial action for OU5 Subarea 1	September 2004
EPA conducted the final inspection of the OU3 remedial action	September 14, 2004
EPA issued the Preliminary Close-Out Report for the Site	September 28, 2004
EPA issued Ready for Reuse Determinations for OU3 Sites 1 and 4, OU4 and OU5 Subareas 1-4	May 10, 2005
PRPs completed a Post-Remediation Action Inspection Report	July 7, 2005
EPA sent a letter to RSR Corporation containing a certification of the Site's Ready for Reuse Determination	August 1, 2005
EPA completed the Site's first FYR Report	September 29, 2005
EPA deleted OU4 and OU5 Subarea 1 from the NPL	October 16, 2007
EPA completed the Site's second FYR Report	September 21, 2010
EPA completed the Site's third FYR Report	September 1, 2015
EPA contractors plugged 11 wells on OU5 Subarea 1	October 17, 2017


APPENDIX C – PRESS NOTICE

Legal Notices

Legal Notices

Legal Notices

Legal Notices



RSR Corporation Superfund Site Public Notice U.S. Environmental Protection Agency, Region 6 December 2019

The U.S. Environmental Protection Agency, Region 6 (EPA) will be conducting the fourth five-year review of remedy implementation and performance at the RSR Corporation Superfund site (Site) in Dallas, Texas. For nearly 50 years, RSR Corporation operated a major lead smelter in the West Dallas area. Facility operators processed spent car batteries and scrap lead. The company sent resulting waste materials, byproducts and batteries to nearby landfills where these wastes contaminated soils, sediment and groundwater. Wind also transported lead dust from the smelter into nearby parks, schools and neighborhoods. EPA placed the Site on the Superfund program's National Priorities List in 1995.

EPA assessed nearly 7,000 properties and cleaned up the yards of over 400 properties between 1991 and 1994. Much of the lead dust deposited from the RSR smokestack affected a nearby Dallas Housing Authority public housing complex. With EPA oversight, Dallas Housing Authority removed the soil contamination, demolished the aging public housing that existed on site and reconstructed more than 1,200 units of affordable housing for the West Dallas community.

The selected remedies at the Site included excavation of contaminated soil and sediment, demolition and removal of impacted equipment and building materials, construction of a containment cap, groundwater monitoring, and implementation of institutional controls.

The five-year review will determine if the remedies are still protective of human health and the environment. The five-year review is scheduled for completion in June 2020.

The report will be made available to the public at the following local information repository:

EPA Region 6
1201 Elm Street
Dallas, Texas 75270

Site status updates are available on the Internet at www.epa.gov/superfund/rsr-corporation

All media inquiries should be directed to the EPA Press Office at (214) 665-2200

For more information about the Site, contact:

Hope Schroeder/Remedial Project Manager (214) 665-7142 or 1-800-533-3508 (toll-free) or by email at schroeder.hope@epa.gov	Casey Luckett/Remedial Project Manager (214) 665-7393 or 1-800-533-3508 (toll-free) or by email at luckett.casey@epa.gov	Janetta Coats/Community Involvement Coordinator (214) 665-7308 or 1-800-533-3508 (toll-free) or by email at coats.janetta@epa.gov
---	--	--

DN-1748524-01

LOCAL JOURNALISM
DELIVERED THE WAY YOU WANT

Call 1-800-925-1500 or
visit dallasnews.com/subscribe

The Dallas Morning News



Sitio Superfund RSR Corporation
Aviso Público
La Región 6 de la Agencia de Protección
Ambiental de los Estados Unidos

Diciembre de 2019

La Región 6 de la Agencia de Protección Ambiental de los Estados Unidos (EPA, por sus siglas en inglés) llevará a cabo la cuarta revisión de cinco años de la implementación y rendimiento del plan de limpieza del sitio Superfund (sitio) RSR Corporation en Dallas, Texas. Durante casi 50 años, RSR Corporation operó una importante fundición de plomo en el área del oeste de Dallas. Los operadores de las instalaciones procesaron baterías de automóviles gastadas y desechos de plomo. La compañía envió los materiales de desecho resultantes de estas operaciones, tanto como subproductos y baterías, a vertederos cercanos, donde estos desechos contaminaron a suelos, sedimentos y aguas subterráneas. El viento también transportó el polvo de plomo de la fundición a parques, escuelas y vecindarios cercanos. La EPA incluyó el sitio en la Lista Nacional de Prioridades del programa Superfund en 1995.

La EPA evaluó cerca de 7,000 propiedades y limpió los jardines de más de 400 propiedades entre 1991 y 1994. Gran parte del polvo de plomo depositado por la chimenea de RSR afectó un complejo de viviendas públicas cercano de la Autoridad de Vivienda de Dallas. Con la supervisión de la EPA, la Autoridad de Vivienda de Dallas eliminó la contaminación del suelo, demolió las antiguas viviendas públicas que existían en el sitio y reconstruyó más de 1,200

unidades de viviendas asequibles para la comunidad del oeste de Dallas.

Los planes de limpieza seleccionados para el sitio incluyeron la excavación de suelos y sedimentos contaminados, la demolición y eliminación de equipos y materiales de construcción impactados, la construcción de una capa para contener la contaminación, el monitoreo de las aguas subterráneas y la implementación de controles institucionales.

La revisión de cinco años determinará si los remedios siguen protegiendo la salud humana y el medio ambiente. La revisión de cinco años está prevista para junio de 2020.

El informe se pondrá a disposición del público en el siguiente repositorio local de información:

EPA Region 6
1201 Elm Street
Dallas, Texas 75270

Actualizaciones del estado del sitio Superfund están disponibles en Internet en
www.epa.gov/superfund/rsr-corporation

Todas las preguntas de los medios deben dirigirse a la Oficina de la Prensa de la EPA al (214) 665-2200

Para obtener más información sobre el sitio, contacte a:

Hope Schroeder/ Gerente de Proyecto de
Limpieza
(214) 665-7142

o 1-800-533-3508 (número gratuito) o por
correo electrónico a schroeder.hope@epa.gov

Casey Luckett/ Gerente de Proyecto de
Limpieza
(214) 665-7393

o 1-800-533-3508 (número gratuito) o por
correo electrónico a luckett.casey@epa.gov

Janetta Coats/ Coordinadora de
Participación Comunitaria
(214) 665-7308

o 1-800-533-3508 (número gratuito) o por
correo electrónico a coats.janetta@epa.gov

DN-1748528-01

APPENDIX D – SITE INSPECTION CHECKLIST

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST			
I. SITE INFORMATION			
Site Name: RSR Corporation		Date of Inspection: 11/20/2019	
Location and Region: Dallas, Texas - Region 6		EPA ID: TXD079348397	
Agency, Office or Company Leading the Five-Year Review: Region 6		Weather/Temperature: 60s and overcast	
Remedy Includes: (check all that apply) <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 48%;"> <input checked="" type="checkbox"/> Landfill cover/containment <input type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls <input type="checkbox"/> Groundwater pump and treatment <input type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other: _____ </div> <div style="width: 48%;"> <input type="checkbox"/> Monitored natural attenuation <input type="checkbox"/> Groundwater containment <input type="checkbox"/> Vertical barrier walls </div> </div>			
Attachments: <input type="checkbox"/> Inspection team roster attached <input type="checkbox"/> Site map attached			
II. INTERVIEWS (check all that apply)			
1. O&M Site Manager <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 30%;">Name _____</div> <div style="width: 30%;">Title _____</div> <div style="width: 30%;">Date _____</div> </div> <div style="margin-top: 5px;"> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone: _____ </div> <div style="margin-top: 5px;"> Problems, suggestions <input type="checkbox"/> Report attached: _____ </div>			
2. O&M Staff <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 30%;">Name _____</div> <div style="width: 30%;">Title _____</div> <div style="width: 30%;">Date _____</div> </div> <div style="margin-top: 5px;"> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone: _____ </div> <div style="margin-top: 5px;"> Problems/suggestions <input type="checkbox"/> Report attached: _____ </div>			
3. Local Regulatory Authorities and Response Agencies (i.e., state and tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices). Fill in all that apply. <div style="margin-top: 10px;"> Agency _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 30%;">Name _____</div> <div style="width: 30%;">Title _____</div> <div style="width: 30%;">Date _____</div> <div style="width: 30%;">Phone No. _____</div> </div> Problems/suggestions <input type="checkbox"/> Report attached: _____ </div> <div style="margin-top: 10px;"> Agency _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 30%;">Name _____</div> <div style="width: 30%;">Title _____</div> <div style="width: 30%;">Date _____</div> <div style="width: 30%;">Phone No. _____</div> </div> Problems/suggestions <input type="checkbox"/> Report attached: _____ </div> <div style="margin-top: 10px;"> Agency _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 30%;">Name _____</div> <div style="width: 30%;">Title _____</div> <div style="width: 30%;">Date _____</div> <div style="width: 30%;">Phone No. _____</div> </div> Problems/suggestions <input type="checkbox"/> Report attached: _____ </div> <div style="margin-top: 10px;"> Agency _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 30%;">Name _____</div> <div style="width: 30%;">Title _____</div> <div style="width: 30%;">Date _____</div> <div style="width: 30%;">Phone No. _____</div> </div> Problems/suggestions <input type="checkbox"/> Report attached: _____ </div> <div style="margin-top: 10px;"> Agency _____ Contact _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 30%;">Name _____</div> <div style="width: 30%;">Title _____</div> <div style="width: 30%;">Date _____</div> <div style="width: 30%;">Phone No. _____</div> </div> Problems/suggestions <input type="checkbox"/> Report attached: _____ </div>			

Name	Title	Date	Phone No.
Problems/suggestions <input type="checkbox"/> Report attached: _____			
4. Other Interviews (optional) <input type="checkbox"/> Report attached: _____			
III. ON-SITE DOCUMENTS AND RECORDS VERIFIED (check all that apply)			
1. O&M Documents			
<input type="checkbox"/> O&M manual	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> As-built drawings	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Maintenance logs	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
2. Site-Specific Health and Safety Plan			
<input type="checkbox"/> Contingency plan/emergency response plan	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
3. O&M and OSHA Training Records			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
Remarks: _____			
4. Permits and Service Agreements			
<input type="checkbox"/> Air discharge permit	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Effluent discharge	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Waste disposal, POTW	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Other permits: _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
5. Gas Generation Records			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
Remarks: _____			
6. Settlement Monument Records			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
Remarks: _____			
7. Groundwater Monitoring Records			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
Remarks: _____			
8. Leachate Extraction Records			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
Remarks: _____			
9. Discharge Compliance Records			
<input type="checkbox"/> Air	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Water (effluent)	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
10. Daily Access/Security Logs			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
Remarks: _____			

IV. O&M COSTS																																							
1.	O&M Organization <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> State in-house <input type="checkbox"/> PRP in-house <input type="checkbox"/> Federal facility in-house <input type="checkbox"/> _____ </div> <div> <input type="checkbox"/> Contractor for state <input checked="" type="checkbox"/> Contractor for PRP <input type="checkbox"/> Contractor for Federal facility </div> </div>																																						
2.	O&M Cost Records <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Readily available <input type="checkbox"/> Funding mechanism/agreement in place Original O&M cost estimate: _____ </div> <div> <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> Unavailable <input type="checkbox"/> Breakdown attached </div> </div> <p style="text-align: center; margin-top: 10px;">Total annual cost by year for review period if available</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">From: _____ Date</td> <td style="width: 25%;">To: _____ Date</td> <td style="width: 25%;">_____ Total cost</td> <td style="width: 25%; text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr><td colspan="4"> </td></tr> <tr> <td>From: _____ Date</td> <td>To: _____ Date</td> <td>_____ Total cost</td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr><td colspan="4"> </td></tr> <tr> <td>From: _____ Date</td> <td>To: _____ Date</td> <td>_____ Total cost</td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr><td colspan="4"> </td></tr> <tr> <td>From: _____ Date</td> <td>To: _____ Date</td> <td>_____ Total cost</td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr><td colspan="4"> </td></tr> <tr> <td>From: _____ Date</td> <td>To: _____ Date</td> <td>_____ Total cost</td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> </table>			From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached					From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached					From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached					From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached					From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached
From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached																																				
From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached																																				
From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached																																				
From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached																																				
From: _____ Date	To: _____ Date	_____ Total cost	<input type="checkbox"/> Breakdown attached																																				
3.	Unanticipated or Unusually High O&M Costs during Review Period Describe costs and reasons: _____																																						
V. ACCESS AND INSTITUTIONAL CONTROLS <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A																																							
A. Fencing																																							
1.	Fencing Damaged <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Gates secured <input type="checkbox"/> N/A Remarks: <u>Fencing around OU5 subareas 4A, 4B and 4C were secure. Fencing at OU3 Site 1 was new and intact. The gate and fencing at OU3 Site 3 was damaged and incomplete. OU5 Subareas 1 and 2 had secure fencing.</u>																																						
B. Other Access Restrictions																																							
1.	Signs and Other Security Measures <input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A Remarks: _____																																						
C. Institutional Controls (ICs)																																							

1.	Implementation and Enforcement	
	Site conditions imply ICs not properly implemented	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	Site conditions imply ICs not being fully enforced	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	Type of monitoring (e.g., self-reporting, drive by): _____	
	Frequency: _____	
	Responsible party/agency: _____	
	Contact _____	
	Name	Title
		Date
		Phone no.
	Reporting is up to date	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	Reports are verified by the lead agency	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	Specific requirements in deed or decision documents have been met	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
	Violations have been reported	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
	Other problems or suggestions: <input type="checkbox"/> Report attached	

2.	Adequacy <input type="checkbox"/> ICs are adequate <input checked="" type="checkbox"/> ICs are inadequate <input type="checkbox"/> N/A Remarks: <u>Institutional controls are in place for some, but not all affected parcels.</u>	
----	--	--

D. General		
1.	Vandalism/Trespassing <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No vandalism evident Remarks: <u>Dumping seen at OU3 Site Area 3 and Site Area 4.</u>	
2.	Land Use Changes On Site <input type="checkbox"/> N/A Remarks: <u>A new gas station and convenience store are located at OU4 and Dallas Lite & Barricade is now operating on OU5 Subarea 1.</u>	
3.	Land Use Changes Off Site <input checked="" type="checkbox"/> N/A Remarks: _____	

VI. GENERAL SITE CONDITIONS		
	A. Roads <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A	
1.	Roads Damaged <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Roads adequate <input type="checkbox"/> N/A Remarks: _____	
B. Other Site Conditions		
	Remarks: _____	

VII. LANDFILL COVERS <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A		
A. Landfill Surface		
1.	Settlement (low spots) <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident Area extent: _____ Depth: _____ Remarks: <u>No settlement observed at OU5 Subareas 1 and 2.</u>	
2.	Cracks <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Cracking not evident Lengths: _____ Widths: _____ Depths: _____ Remarks: _____	

3.	Erosion Area extent: _____ Remarks: _____	<input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Erosion not evident Depth: _____
4.	Holes Area extent: _____ Remarks: _____	<input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Holes not evident Depth: _____
5.	Vegetative Cover <input checked="" type="checkbox"/> Grass <input type="checkbox"/> No signs of stress <input type="checkbox"/> Trees/shrubs (indicate size and locations on a diagram) <input type="checkbox"/> Cover properly established Remarks: Grass is well-maintained at OU5 Subareas 1 and 2. OU3 Site 4 had trees and grasses across the area. OU3 Site 3 was covered with brush and tall grasses. OU3 Site 1 was mowed. OU4 was mowed. OU5 Subarea 4 was well-maintained.	
6.	Alternative Cover (e.g., armored rock, concrete) Remarks: _____ <input checked="" type="checkbox"/> N/A	
7.	Bulges Area extent: _____ Remarks: _____	<input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Bulges not evident Height: _____
8.	Wet Areas/Water Damage <input checked="" type="checkbox"/> Wet areas/water damage not evident <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input type="checkbox"/> Wet areas <input type="checkbox"/> Ponding <input type="checkbox"/> Seeps <input type="checkbox"/> Soft subgrade </div> <div style="width: 30%;"> <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map </div> <div style="width: 30%;"> Area extent: _____ Area extent: _____ Area extent: _____ Area extent: _____ </div> </div> Remarks: _____	
9.	Slope Instability <input type="checkbox"/> Slides <input checked="" type="checkbox"/> No evidence of slope instability Area extent: _____ Remarks: _____ <input type="checkbox"/> Location shown on site map	
B. Benches <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)		
1.	Flows Bypass Bench Remarks: _____ <input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay	
2.	Bench Breached Remarks: _____ <input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay	
3.	Bench Overtopped Remarks: _____ <input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay	
C. Letdown Channels <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A (Channel lined with erosion control mats, riprap, grout bags or gabions that descend down the steep side		

slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)			
1.	Settlement (Low spots)	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of settlement
	Area extent: _____		Depth: _____
	Remarks: _____		
2.	Material Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of degradation
	Material type: _____		Area extent: _____
	Remarks: _____		
3.	Erosion	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of erosion
	Area extent: _____		Depth: _____
	Remarks: _____		
4.	Undercutting	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of undercutting
	Area extent: _____		Depth: _____
	Remarks: _____		
5.	Obstructions	Type: _____	<input type="checkbox"/> No obstructions
	<input type="checkbox"/> Location shown on site map	Area extent: _____	
	Size: _____		
	Remarks: _____		
6.	Excessive Vegetative Growth	Type: _____	
	<input type="checkbox"/> No evidence of excessive growth		
	<input type="checkbox"/> Vegetation in channels does not obstruct flow		
	<input type="checkbox"/> Location shown on site map	Area extent: _____	
	Remarks: _____		
D. Cover Penetrations <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
1.	Gas Vents	<input type="checkbox"/> Active	<input type="checkbox"/> Passive
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs maintenance	<input type="checkbox"/> Good condition
			<input type="checkbox"/> N/A
	Remarks: _____		
2.	Gas Monitoring Probes	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition
		<input type="checkbox"/> Needs maintenance	<input type="checkbox"/> N/A
	Remarks: _____		
3.	Monitoring Wells (within surface area of landfill)		
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled
	<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs maintenance	<input type="checkbox"/> Good condition
			<input type="checkbox"/> N/A
	Remarks: _____		
4.	Extraction Wells Leachate		

	<input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs maintenance <input type="checkbox"/> N/A Remarks: _____
5.	Settlement Monuments <input type="checkbox"/> Located <input type="checkbox"/> Routinely surveyed <input type="checkbox"/> N/A Remarks: _____
E. Gas Collection and Treatment <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
1.	Gas Treatment Facilities <input type="checkbox"/> Flaring <input type="checkbox"/> Thermal destruction <input type="checkbox"/> Collection for reuse <input type="checkbox"/> Good condition <input type="checkbox"/> Needs maintenance Remarks: _____
2.	Gas Collection Wells, Manifolds and Piping <input type="checkbox"/> Good condition <input type="checkbox"/> Needs maintenance Remarks: _____
3.	Gas Monitoring Facilities (e.g., gas monitoring of adjacent homes or buildings) <input type="checkbox"/> Good condition <input type="checkbox"/> Needs maintenance <input type="checkbox"/> N/A Remarks: _____
F. Cover Drainage Layer <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
1.	Outlet Pipes Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks: _____
2.	Outlet Rock Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks: _____
G. Detention/Sedimentation Ponds <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A	
1.	Siltation Area extent: _____ Depth: _____ <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Siltation not evident Remarks: _____
2.	Erosion Area extent: _____ Depth: _____ <input checked="" type="checkbox"/> Erosion not evident Remarks: _____
3.	Outlet Works <input type="checkbox"/> Functioning <input checked="" type="checkbox"/> N/A Remarks: _____
4.	Dam <input type="checkbox"/> Functioning <input checked="" type="checkbox"/> N/A Remarks: _____
H. Retaining Walls <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
1.	Deformations <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Deformation not evident Horizontal displacement: _____ Vertical displacement: _____ Rotational displacement: _____

Remarks: _____		
2.	Degradation	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Degradation not evident Remarks: _____
I. Perimeter Ditches/Off-Site Discharge <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Siltation	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Siltation not evident Area extent: _____ Depth: _____ Remarks: _____
2.	Vegetative Growth	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A <input type="checkbox"/> Vegetation does not impede flow Area extent: _____ Type: _____ Remarks: _____
3.	Erosion	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Erosion not evident Area extent: _____ Depth: _____ Remarks: _____
4.	Discharge Structure	<input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks: _____
VIII. VERTICAL BARRIER WALLS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Settlement	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident Area extent: _____ Depth: _____ Remarks: _____
2.	Performance Monitoring	Type of monitoring: _____ <input type="checkbox"/> Performance not monitored Frequency: _____ <input type="checkbox"/> Evidence of breaching Head differential: _____ Remarks: _____
IX. GROUNDWATER/SURFACE WATER REMEDIES <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
X. OTHER REMEDIES		
If there are remedies applied at the site and not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.		
XI. OVERALL OBSERVATIONS		
A. Implementation of the Remedy		
Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is designed to accomplish (e.g., to contain contaminant plume, minimize infiltration and gas emissions). <u>Soil covers at OU5 Subareas 1 and 2 remain well maintained. The buried slag pile at OU5 Subarea 1 will be regraded with EPA oversight to accommodate current landowner operations, but it is unclear who is implementing the OU5 Subarea 1 O&M plan. OU3 Site 1 is fenced and has not been disturbed. OU3 Site 3 has had fill brought in within the last five years and it is unclear if other changes are imminent at the property. No O&M is currently taking place at OU3 Site 3. OU3 Site 4 is overgrown and the 2005 O&M Plan indicates that maintenance of the vegetative covers will include mowing on an as needed basis to maintain the remedy.</u>		
B. Adequacy of O&M		

	<p>Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.</p> <p><u>No O&M is currently performed at OU3 Site 3 or OU4. A portion of OU4 was recently redeveloped into a convenience store and gas station.</u></p>
C.	<p>Early Indicators of Potential Remedy Problems</p>
	<p>Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.</p> <p><u>O&M responsibilities for OU3 Site 3 and and OU5 Subarea 1 should be established. The OU4 ROD indicated OU4 would not require O&M. Institutional controls are needed for properties at OUs 3 and 5 that do not allow for UU/UE.</u></p>
D.	<p>Opportunities for Optimization</p>
	<p>Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.</p> <p><u>None.</u></p>

APPENDIX E – SITE INSPECTION PHOTOS



OU3 – Site Area 1 with new fencing



OU3 – Site 3 road and gate



OU3 – Site 4



OU3 – Site 4



OU4 with new gas station and convenience store in background



Gas station under construction at OU4



OU5 – Subarea 1 slag pile that will remain on site



OU5 – Subarea 1 area that will be regraded



OU5 – Subarea 2 fencing



OU5 – Subarea 2 cap



OU5 – Subarea 2 reinforced drainage toe



Locked gate at OU5 Subarea 4B

APPENDIX F – SCREENING-LEVEL RISK REVIEW

The soil cleanup goals for OUs 3, 4, and 5 were established for the protection of human receptors. To evaluate whether any exposure factor and toxicity value changes since the ROD could affect remediation levels, the soil cleanup levels were compared to EPA's RSLs.

As demonstrated in Table F-1, the ROD residential cleanup goal for arsenic represents a cancer risk that is within EPA's risk management range of 1×10^{-6} to 1×10^{-4} . Only the antimony cleanup goals resulted in the exceedance of EPA's target noncancer HQ of 1. The lead cleanup goal exceeds the residential screening level of 400 mg/kg. Since residents do not live in Jaycee Park and recreational exposures are less frequent and shorter in duration, applying residential-based cleanup goals to the park is overly conservative. Further, most of the park area that is part of the Site is covered by recreational courts, parking lots and a building.

To determine if the ROD surface soil cleanup goals are protective of recreational exposures at Jaycee Park, recreational exposure-based RSLs were developed using the EPA's online RSL calculator with the following assumptions: recreator exposure, EPA's default toxicity values, and default exposure factors except for exposure frequency, duration and climatic zone. A conservative assumption was a child recreating once a week for 52 weeks for four hours each visit. As shown, (Table F-2) ROD cleanup goals are protective of recreational exposures as the cancer risks remain within EPA's acceptable risk management range and the noncancer HQ are below EPA's threshold of 1.

EPA has no consensus on carcinogenic or noncarcinogenic toxicity values for inorganic lead, so it is not possible to calculate RSLs. Therefore, EPA evaluates lead exposure by using blood-lead modeling and established a default residential RSL of 400 mg/kg. EPA has not established a recreational exposure based RSL for lead, however, the average concentration of lead (408 mg/kg) in the park was nearly the same as the residential RSL. Since residents do not live in the park and recreational exposures are less frequent and shorter in duration, the residual average lead concentration is expected to be protective for recreational exposure.

Table F-1: Screening-Level Risk Evaluation of OU3 Residential Cleanup Goals

Contaminant of Concern	ROD Residential Cleanup Goal (mg/kg)	Residential RSL ^a (mg/kg)		Cancer Risk ^b	Noncancer HQ ^c
		1×10^{-6} Risk	HQ=1.0		
Arsenic	20	0.68	35	3×10^{-5}	0.6
Lead	500	400 ^d		> 400	
Antimony ^e	108	NA	31	--	3.5

Notes:

a. Current EPA RSLs, dated 2019, are available at <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables> (accessed 1/20/2020).

b. The cancer risks were calculated using the following equation, based on the fact that RSLs are derived based on 1×10^{-6} risk: cancer risk = (cleanup level ÷ cancer-based RSL) $\times 10^{-6}$.

c. The noncancer HQ was calculated using the following equation: HQ = cleanup level ÷ noncancer-based RSL.

d. EPA has no consensus on carcinogenic or noncarcinogenic toxicity values for inorganic lead, so it is not possible to calculate RSLs. Therefore, EPA evaluates lead exposure by using blood-lead modeling and established a default residential level of 400 mg/kg. If this value is exceeded, use of site-specific information is recommended, which may include blood-lead models or blood-lead testing.

e. RSL for antimony (metallic) used in calculation of risk.

NA = not applicable; noncancer toxicity criteria not established

Bold = cancer risk exceeds 1×10^{-4} or the noncancer HQ of 1.0

Table F-2: Screening-Level Risk Evaluation of OU3 Cleanup Goals Based on Recreational Use

Contaminant of Concern	ROD Residential Cleanup Goal (mg/kg)	Recreational RSL ^a (mg/kg)		Cancer Risk ^b	Noncancer HQ ^c
		1 x 10 ⁻⁶ Risk	HQ=1.0		
Arsenic	20	4.56	235	4x10 ⁻⁶	0.1
Lead	500	400 ^d		> 400	
Antimony ^e	108	NA	211	--	0.5

Notes:

a. Recreational RSL based on an assumption that a young child spends 1 day per week or 52 days per year at Jaycee Park for four hours per visit using Houston, Texas, as the climatic zone in the absence of a Dallas selection in the calculator. All other exposure factors were EPA's default exposure factors. The calculator is available at https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search (accessed 2/10/2020).

b. The cancer risks were calculated using the following equation, based on the fact that RSLs are derived based on 1 x 10⁻⁶ risk: cancer risk = (cleanup level ÷ cancer-based RSL) × 10⁻⁶.

c. The noncancer HQ was calculated using the following equation: HQ = cleanup level ÷ noncancer-based RSL.

d. EPA has no consensus on carcinogenic or noncarcinogenic toxicity values for inorganic lead, so it is not possible to calculate RSLs. Therefore, EPA evaluates lead exposure by using blood-lead modeling and established a default residential level of 400 mg/kg. If this value is exceeded, use of site-specific information is recommended, which may include blood-lead models or blood-lead testing.

e. RSL for antimony (metallic) used in calculation of risk.

NA = not applicable; noncancer toxicity criteria not established

As demonstrated in Table F-3, the ROD industrial cleanup goals for antimony and cadmium are above the target noncancer hazard HQ of 1. Most areas of the Site were backfilled with clean soils after excavation; soil contamination levels may remain at depth and require institutional controls for long-term protectiveness.

Table F-3: Screening-Level Risk Evaluation of OU3, OU4 and OU5 Industrial Cleanup Goals

Contaminant of Concern	ROD Industrial Cleanup Goal (mg/kg)	Industrial RSL ^a (mg/kg)		Cancer Risk ^b	Noncancer HQ ^c
		1 x 10 ⁻⁶ Risk	HQ=1.0		
Arsenic	32.7	3	480	1x10 ⁻⁵	0.1
Lead	2,000	800 ^d		> 800	
Antimony ^e	818	NA	470	--	1.7
Cadmium	2,044	9,300	980	2x10 ⁻⁷	2.1

Notes:

a. Current EPA RSLs, dated 2019, are available at <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables> (accessed 1/20/2020).

b. The cancer risks were calculated using the following equation, based on the fact that RSLs are derived based on 1 x 10⁻⁶ risk: cancer risk = (cleanup level ÷ cancer-based RSL) × 10⁻⁶.

c. The noncancer HQ was calculated using the following equation: HQ = cleanup level ÷ noncancer-based RSL.

d. EPA has no consensus on carcinogenic or noncarcinogenic toxicity values for inorganic lead, so it is not possible to calculate RSLs. Therefore, EPA evaluates lead exposure by using blood-lead modeling and established a default industrial level of 800 mg/kg. If this value is exceeded, use of site-specific information is recommended, which may include blood-lead models or blood-lead testing.

e. RSL for antimony (metallic) used in calculation of risk.

NA = not applicable; noncancer toxicity criteria not established

Bold = cancer risk exceeds 1 x 10⁻⁴ or the noncancer HQ of 1.0

APPENDIX G – INTERVIEW FORMS

RSR CORPORATION SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM	
Site Name: RSR Corporation	
EPA ID: TXD079348397	
Interviewer name: Hope Schroeder	Interviewer affiliation: USEPA
Subject name: Jenny Self	Subject affiliation: ENTACT LLC
Subject contact information: (972) 580-1323	
Interview date: 01/31/2020	Interview time: 3:45pm
Interview location: ENTACT office in Grapevine, Texas	
Interview format (circle one): In Person Phone Mail Email Other:	
Interview category: Potentially Responsible Party (PRP)	

1. What is your overall impression of the remedial activities at the Site?
The implemented remedy is protective of human health and the environment, as designed.

2. What have been the effects of this Site on the surrounding community, if any?
Remediation of the Site has allowed additional development in the area to support community needs.

3. What is your assessment of the current performance of the remedy in place at the Site?
The implemented remedy is performing as designed and is protective of human health and the environment.

4. Are you aware of any complaints or inquiries regarding environmental issues or the remedial action from residents since implementation of the cleanup? *No*

5. Do you feel well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future? *Not applicable*

6. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy? *No*

7. Do you consent to have your name included along with your responses to this questionnaire in the FYR report? *Yes*

RSR CORPORATION SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM	
Site Name: RSR Corporation	
EPA ID: TXD079348397	
Interviewer name: Hope Schroeder	Interviewer affiliation: USEPA
Subject name: Kelsey Hein	Subject affiliation: RSR Corporation
Subject contact information: (214) 583-0248	
Interview date: 2/4/2020	Interview time: 9:00 AM
Interview location: RSR Corporation Office, Dallas, TX	
Interview format (circle one): In Person Phone Mail <u>Email</u> Other:	
Interview category: Potentially Responsible Party (PRP)	

- What is your overall impression of the remedial activities at the Site?
The remedial activities function as intended, to protect the environment and human health.
- What have been the effects of this Site on the surrounding community, if any?
Our properties are well maintained, and construction in the surrounding areas has increased.
- What is your assessment of the current performance of the remedy in place at the Site?
The remedy in place is performing as intended and is protective of the environment and human health.
- Are you aware of any complaints or inquiries regarding environmental issues or the remedial action from residents since implementation of the cleanup?
No
- Do you feel well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future?
Not applicable
- Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?
No
- Do you consent to have your name included along with your responses to this questionnaire in the FYR report?
Yes

RSR CORPORATION SUPERFUND SITE FIVE-YEAR REVIEW INTERVIEW FORM	
Site Name: RSR Corporation	
EPA ID: TXD079348397	
Interviewer name:	Interviewer affiliation:
Subject name: Kenan Nerad	Subject affiliation: TCEQ PM
Subject contact information: Kenan.Nerad@tceq.texas.gov 713-767-3573	
Interview date:	Interview time:
Interview location:	
Interview format (circle one): In Person Phone Mail Email Other:	
Interview category: TCEQ	

1. What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?

Cleanup activities are appropriate for the project. Maintenance of all operable units appeared to have been done properly during the site visit. EPA has already begun to delete operable units from the site and indicated plans to delete more moving forward. Reuse activities are currently appropriate to not interfere with the remedy.

2. What is your assessment of the current performance of the remedy in place at the Site?

The remedies in place appear to be effective in protecting human health. No maintenance issues were noted for any operable units during the site inspection.

3. Are you aware of any complaints or inquiries regarding site-related environmental issues or remedial activities from residents in the past five years?

The TCEQ has had a few inquiries from the public in the past five years. On October 19, 2016, a schoolteacher wishing to construct a school garden requested information. On September 27, 2019, a consultant performing a Phase 1 environmental site assessment requested a map of the operable units to determine if their property was within the boundaries. On November 18, 2019, a consultant conducting a Phase 1 environmental site assessment requested remedial investigation reports for OU 1. On December 17, 2019, a Dallas News article was published which described the discovery of uncovered contaminated soils at the 7-Eleven during construction. On January 2, 2020, a middle school baseball coach inquired about potential health risk players may face when sliding into dirt. On January 16, 2020, the TCEQ received a legislative inquiry about the site and provided information about our role and responsibilities regarding the site.

4. Has your office conducted any site-related activities or communications in the past five years? If so, please describe the purpose and results of these activities.

To my knowledge, the only activities the TCEQ conducted in the past five years included submitting comments regarding the last Five-Year Review and responding to the inquiries detailed in the previous question above.

5. Are you aware of any changes to state laws that might affect the protectiveness of the Site's remedy?

I am not.

6. Are you comfortable with the status of the institutional controls at the Site? If not, what are the associated outstanding issues?

No. During our site visit, we made note of a few subareas which still need institutional controls. OU 5 Subareas 4A, 4B, and 4C need an IC before they can be deleted. OU 3 Subarea 4 is missing two deed notices out of seventeen total deeds. During the last Five-Year Review, it was noted that seven impacted properties at OU 3 Subareas 3 and 4 did not have deed notices.

7. Are you aware of any changes in projected land use(s) at the Site?

There is a 7-Eleven currently being constructed on OU 4. There are plans to uncover the slag burial pit at OU 5 Subarea 1 (Dallas Lite & Brigade) to construct a parking lot. Dallas Housing Authority, among others, has been planning future developments within various operable units for the site.

8. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?

Much of the site is stable O&M. To prevent accidental exposure to impacted soils, future soil management plans for redevelopment projects located on operable units with buried slag pits and soils, such as OU 4, OU 5 Subarea 1, and OU 3 Subareas 1, 3, and 4, should be carefully monitored to ensure the soil management plan is adhered to properly.

9. Do you consent to have your name included along with your responses to this questionnaire in the FYR report?

Yes.